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MONTHLY BULLETIN

OF THE

STATE BOARD OF HEALTH

OF

MASSACHUSETTS:

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STATE BOARD OF HEALTH.

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BOSTON:

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1908.

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1908

WEEKLY RETURNS OF DEATHS FROM CITIES AND TOWNS OF MORE THAN 10,000 POPULATION.

A
WEEK ENDING JAN. 4, 1908.

CITIES AND TOWNS.	Population, ¹ Esti- mated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —						
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.	
Boston,	617,082	228	58	31	51	19	1	1	2	
Worcester,	134,341	60	17	14	12	3	1	—	2	
Fall River,	106,305	40	17	11	9	1	1	—	—	
Cambridge,	100,922	27	9	3	5	3	—	—	—	
Lowell,	96,380	46	14	7	13	3	1	—	2	
Lynn,	82,661	24	5	1	—	1	—	—	—	
New Bedford,	82,580	43	13	3	14	2	1	—	—	
Springfield,	81,425	43	4	10	9	4	2	2	—	
Lawrence,	78,000	37	10	5	10	4	—	—	—	
Somerville,	74,295	22	4	3	3	1	1	—	—	
Brockton,	53,131	26	5	1	7	—	1	—	—	
Holyoke,	52,652	18	8	4	—	2	2	—	—	
Malden,	40,929	12	1	—	—	—	—	—	—	
Chelsea,	39,363	13	1	5	2	5	—	—	—	
Newton,	38,919	9	1	—	3	—	—	—	—	
Salem,	38,666	14	—	2	—	2	—	—	—	
Haverhill,	38,228	14	1	—	—	—	—	—	—	
Fitchburg,	33,948	11	3	—	3	—	—	—	—	
Everett,	32,415	15	4	4	—	4	—	—	—	
Taunton,	30,967	16	3	1	1	—	1	—	—	
Quincy,	30,924	5	2	1	1	1	—	—	—	
Waltham,	28,120	11	0	1	3	—	—	—	1	
Pittsfield,	27,168	—	—	—	—	—	—	—	—	
Gloucester,	26,011	2	1	—	—	—	—	—	—	
Brookline,	25,825	6	—	—	—	—	—	—	—	
North Adams,	22,150	12	2	1	—	—	—	—	—	
Chicopee,	20,831	11	5	2	2	2	—	—	—	
Northampton,	20,789	6	1	1	—	—	—	—	—	
Medford,	20,605	5	1	—	1	—	—	—	—	
Beverly,	16,088	10	—	—	1	—	—	—	—	
Leominster,	15,578	5	2	—	—	—	—	—	—	
Hyde Park,	15,327	4	0	—	—	—	—	—	—	
Melrose,	15,160	2	0	1	—	1	—	—	—	
Newburyport,	14,794	—	—	—	—	—	—	—	—	
Woburn,	14,492	6	—	—	—	—	—	—	—	
Westfield,	14,457	1	—	—	—	—	—	—	—	
Marlborough,	14,359	8	1	1	1	1	—	—	—	
Revere,	14,248	5	2	1	—	1	—	—	—	
Attleborough,	13,600	4	1	—	—	—	—	—	—	
Peabody,	14,144	—	—	—	—	—	—	—	—	
Adams,	13,375	5	—	2	1	1	—	1	—	
Clinton,	13,105	7	3	—	—	—	—	—	—	
Gardner,	12,794	3	1	1	—	—	—	1	—	
Milford,	12,565	8	1	—	1	—	—	—	—	
Watertown,	12,306	5	1	—	3	—	—	—	—	
Plymouth,	12,149	—	—	—	—	—	—	—	—	
Weymouth,	11,744	3	1	—	—	—	—	—	—	
Framingham,	11,698	1	—	1	—	1	—	—	—	
Southbridge,	11,630	4	2	1	1	1	—	—	—	
Wakefield,	10,903	—	—	—	—	—	—	—	—	
Webster,	10,825	—	—	—	—	—	—	—	—	
Arlington,	10,307	6	0	1	—	1	—	—	—	

Recapitulation.

Total of reporting towns,	2,291,297	863	205	120	157	64	12	5	7
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¹ The populations were estimated upon the rate of growth from 1900 to 1905. Those of Taunton, Gloucester, North Adams and Clinton were allowed to stand as in 1905, having shown no increase during the five-year period. The gain in the population of Lowell is due to the annexation of a part of the town of Tewksbury. The population of Lawrence by the census of 1905 was 70,050, but, owing to the building of the new Wood and Arlington mills, employing at present some 3,000 operatives, an increase of about 8,000 is estimated by the Lawrence board of health, or 78,000.

WEEK ENDING JAN. 11, 1908.

CITIES AND TOWNS.	Population. Estimated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phtisis.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	617,082	229	53	37	46	28	3	—	3
Worcester,	134,341	60	15	12	16	3	2	—	1
Fall River,	106,305	60	15	16	16	3	2	—	1
Cambridge,	100,922	26	9	6	3	2	1	1	—
Lowell,	96,380	47	12	8	15	6	1	—	—
Lynn,	82,661	31	9	2	—	1	—	—	—
New Bedford,	82,580	32	10	3	4	3	—	—	—
Springfield,	81,425	32	3	4	3	4	—	—	—
Lawrence,	78,000	35	8	7	6	4	—	1	—
Somerville,	74,295	15	2	3	3	—	—	—	—
Brockton,	53,131	19	3	3	4	3	—	—	—
Holyoke,	52,652	28	9	7	5	7	—	—	—
Malden,	40,929	10	—	—	—	—	—	—	—
Chelsea,	39,363	20	9	2	2	—	1	—	1
Newton,	38,919	13	1	1	4	—	—	—	—
Salem,	38,666	15	4	2	—	1	—	—	—
Haverhill,	38,228	10	2	4	1	1	—	—	2
Fitchburg,	33,948	14	4	1	2	1	—	—	—
Everett,	32,415	11	3	1	—	—	—	—	—
Taunton,	30,967	16	3	1	3	1	—	—	—
Quincy,	30,924	11	4	2	—	1	—	—	—
Waltham,	28,120	5	0	1	2	1	—	—	—
Pittsfield,	27,168	9	—	1	1	1	—	—	—
Gloucester,	26,011	3	2	—	—	—	—	—	—
Brookline,	25,825	8	1	—	—	—	—	—	—
North Adams,	22,150	7	3	1	—	—	—	—	1
Chicopee,	20,831	6	2	—	2	—	—	—	—
Northampton,	20,789	7	2	—	—	—	—	—	—
Medford,	20,605	4	—	—	2	—	—	—	—
Beverly,	16,088	3	—	—	1	—	—	—	—
Leominster,	15,578	3	1	—	—	—	—	—	—
Hyde Park,	15,327	2	0	2	—	1	—	—	—
Melrose,	15,160	7	0	—	2	—	—	—	—
Newburyport,	14,794	—	—	—	—	—	—	—	—
Woburn,	14,492	8	2	—	—	—	—	—	—
Westfield,	14,457	6	1	—	2	—	—	—	—
Marlborough,	14,359	7	2	—	1	—	—	—	—
Revere,	14,248	5	1	—	1	—	—	—	—
Attleborough,	13,600	3	1	—	1	—	—	—	—
Peabody,	14,144	—	—	—	—	—	—	—	—
Adams,	13,375	—	—	—	—	—	—	—	—
Clinton,	13,105	6	1	1	—	1	—	—	—
Gardner,	12,794	4	—	2	1	1	—	—	—
Milford,	12,565	6	1	—	1	—	—	—	—
Watertown,	12,306	0	—	—	—	—	—	—	—
Plymouth,	12,149	—	—	—	—	—	—	—	—
Weymouth,	11,744	3	0	—	—	—	—	—	—
Framingham,	11,698	5	1	1	1	1	—	—	—
Southbridge,	11,630	5	2	—	4	—	—	—	—
Wakefield,	10,903	—	—	—	—	—	—	—	—
Webster,	10,825	—	—	—	—	—	—	—	—
Arlington,	10,307	3	0	—	—	—	—	—	—

Recapitulation.

Total of reporting towns, .	2,305,090	859	206	132	151	74	9	2	9
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WEEK ENDING JAN. 18, 1908.

CITIES AND TOWNS.	Population. Estimated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM—						
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Pneumonia.	Diphtheria.	Typhoid Fever.	Measles.	
Boston,	617,082	248	60	35	57	22	3	—	1	
Worcester,	134,341	45	16	9	8	3	1	—	—	
Fall River,	106,305	64	28	18	19	6	—	—	4	
Cambridge,	100,922	30	7	5	5	1	—	—	1	
Lowell,	96,380	37	9	2	10	1	1	—	—	
Lynn,	82,661	27	7	5	—	4	—	—	—	
New Bedford,	82,580	26	8	4	4	4	—	—	—	
Springfield,	81,425	29	2	2	7	2	—	—	—	
Lawrence,	78,000	26	8	3	6	1	1	—	1	
Somerville,	74,295	21	6	4	4	3	—	—	—	
Brockton,	53,131	12	2	1	3	—	1	—	—	
Holyoke,	52,652	18	8	5	2	1	1	1	—	
Malden,	40,929	10	2	—	—	—	—	—	—	
Chelsea,	39,363	11	4	—	4	—	—	—	—	
Newton,	38,919	12	3	1	1	1	—	—	—	
Salem,	38,666	16	2	3	—	3	—	—	—	
Haverhill,	38,228	15	—	3	—	1	—	—	—	
Fitchburg,	33,948	7	—	—	2	—	—	—	—	
Everett,	32,415	8	5	1	—	—	1	—	—	
Taunton,	30,967	21	3	3	5	3	—	—	—	
Quincy,	30,924	11	1	—	1	—	—	—	—	
Waltham,	28,120	7	0	—	2	—	—	—	—	
Pittsfield,	27,168	8	1	1	2	1	—	—	—	
Gloucester,	26,011	8	1	—	—	—	—	—	—	
Brookline,	25,825	5	—	—	—	—	—	—	—	
North Adams,	22,150	9	2	3	—	—	—	—	1	
Chicopee,	20,831	8	3	—	2	—	—	—	—	
Northampton,	20,789	8	2	1	3	—	—	—	—	
Medford,	20,605	3	—	—	—	—	1	—	—	
Beverly,	16,088	1	—	—	—	—	—	—	—	
Leominster,	15,578	1	—	—	—	—	—	—	—	
Hyde Park,	15,327	2	0	—	1	—	—	—	—	
Melrose,	15,160	5	0	2	2	2	—	—	—	
Newburyport,	14,794	—	—	—	—	—	—	—	—	
Woburn,	14,492	6	1	—	1	—	—	—	—	
Westfield,	14,457	7	—	2	2	2	—	—	—	
Marlborough,	14,359	4	0	—	1	—	—	—	—	
Revere,	14,248	4	4	—	1	—	—	—	—	
Attleborough,	13,600	8	2	—	2	—	—	—	—	
Peabody,	14,144	—	—	—	—	—	—	—	—	
Adams,	13,375	5	2	—	1	—	—	—	—	
Clinton,	13,105	—	—	—	—	—	—	—	—	
Gardner,	12,794	1	—	—	1	—	—	—	—	
Milford,	12,565	5	—	—	—	—	—	—	—	
Watertown,	12,306	4	0	1	1	1	—	—	—	
Plymouth,	12,149	—	—	—	—	—	—	—	—	
Weymouth,	11,744	2	0	1	—	1	—	—	—	
Framingham,	11,698	7	1	1	2	1	—	—	—	
Southbridge,	11,630	3	—	1	2	1	—	—	—	
Wakefield,	10,903	—	—	—	—	—	—	—	—	
Webster,	10,825	—	—	—	—	—	—	—	—	
Arlington,	10,307	2	0	—	—	—	—	—	—	

Recapitulation.

Total of reporting towns, .	2,305,360	817	200	118	164	65	10	1	8
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WEEK ENDING JAN. 25, 1908.

CITIES AND TOWNS.	Population. Estimated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —						
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.	
Boston,	617,082	230	79	31	41	15	3	—	1	
Worcester,	134,341	69	20	18	10	6	2	—	2	
Fall River,	106,305	50	28	13	6	4	—	—	6	
Cambridge,	100,922	24	8	2	7	1	—	—	—	
Lowell,	96,380	33	9	3	8	2	—	1	—	
Lynn,	82,661	26	4	4	—	3	1	—	—	
New Bedford,	82,580	34	12	3	11	2	1	—	—	
Springfield,	81,425	18	4	2	3	2	—	—	—	
Lawrence,	78,000	15	8	2	3	1	—	—	1	
Somerville,	74,295	20	3	2	5	2	—	—	—	
Brockton,	53,131	12	2	1	3	1	—	—	—	
Holyoke,	52,652	21	7	3	6	1	1	—	—	
Malden,	40,929	14	4	1	—	—	1	—	—	
Chelsea,	39,363	16	2	3	—	3	—	—	—	
Newton,	38,919	14	3	—	3	—	—	—	—	
Salem,	38,666	19	5	2	—	2	—	—	—	
Haverhill,	38,228	15	3	3	4	1	—	1	1	
Fitchburg,	33,948	9	2	—	3	—	—	—	—	
Everett,	32,415	8	1	—	—	—	—	—	—	
Taunton,	30,967	20	5	3	4	2	—	—	—	
Quincy,	30,924	7	2	—	1	—	—	—	—	
Waltham,	28,120	6	2	—	1	—	—	—	—	
Pittsfield,	27,168	14	1	1	3	1	—	—	—	
Gloucester,	26,011	6	—	—	—	—	—	—	—	
Brookline,	25,825	6	1	1	1	1	—	—	—	
North Adams,	22,150	15	2	3	—	2	1	—	—	
Chicopee,	20,831	2	1	1	—	1	—	—	—	
Northampton,	20,789	7	1	4	—	1	—	—	—	
Medford,	20,605	8	1	2	—	—	1	—	—	
Beverly,	16,088	4	1	1	—	1	—	—	—	
Leominster,	15,578	4	1	2	2	1	—	—	—	
Hyde Park,	15,327	4	1	—	1	—	—	—	—	
Melrose,	15,160	4	2	—	1	—	—	—	—	
Newburyport,	14,794	—	—	—	—	—	—	—	—	
Woburn,	14,492	7	—	2	1	1	1	—	—	
Westfield,	14,457	5	—	1	—	1	—	—	—	
Marlborough,	14,359	1	—	—	1	—	—	—	—	
Revere,	14,248	3	1	1	—	1	—	—	—	
Attleborough,	13,600	6	1	1	1	—	1	—	—	
Peabody,	14,144	—	—	—	—	—	—	—	—	
Adams,	13,375	5	2	2	1	2	—	—	—	
Clinton,	13,105	—	—	—	—	—	—	—	—	
Gardner,	12,794	—	—	—	—	—	—	—	—	
Milford,	12,565	3	—	2	—	—	—	1	—	
Watertown,	12,306	3	1	—	2	—	—	—	—	
Plymouth,	12,149	—	—	—	—	—	—	—	—	
Weymouth,	11,744	0	—	—	—	—	—	—	—	
Framingham,	11,698	4	—	—	1	—	—	—	—	
Southbridge,	11,630	2	—	—	1	—	—	—	—	
Wakefield,	10,903	—	—	—	—	—	—	—	—	
Webster,	10,825	—	—	—	—	—	—	—	—	
Arlington,	10,307	3	0	—	—	—	—	—	—	

Recapitulation.

Total of reporting towns,	2,292,566	796	230	120	135	61	13	3	11
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WEEKLY RETURNS OF DEATHS FROM CERTAIN INFECTIOUS DISEASES.

DEATHS FROM INFECTIOUS DISEASES NOT SPECIFICALLY MENTIONED IN ABOVE TABLES DURING THE WEEKS OF JAN. 4, 11, 18 AND 25, 1908.

DISEASE.	Place.	WEEK ENDING —			
		Jan. 4.	Jan. 11.	Jan. 18.	Jan. 25.
Cerebro-spinal meningitis,	Boston, . . .	—	1	4	1
	Cambridge, . . .	—	1	1	—
	Fall River, . . .	—	—	1	1
	Lawrence, . . .	—	1	—	—
	Leominster, . . .	—	—	—	1
	Lowell, . . .	—	1	—	—
	Lynn, . . .	—	—	1	—
	Milford, . . .	—	—	—	1
	Springfield, . . .	1	—	—	—
	Worcester, . . .	1	1	2	1
Erysipelas,	Boston,	4	—	—	3
	Cambridge,	—	1	—	—
	Lynn,	—	1	—	—
	Newton,	—	1	—	—
	Quincy,	—	1	—	—
	Salem,	—	1	—	—
Whooping cough,	Boston,	—	—	1	1
	Everett,	—	1	—	—
	Fall River,	1	1	—	1
	Lawrence,	1	—	—	—
	Northampton,	—	—	1	1
Scarlet fever,	Boston,	2	1	—	1
	Fall River,	1	2	3	1
	Hyde Park,	—	1	—	—
	Holyoke,	—	—	—	1
	Leominster,	—	1	—	—
	Medford,	—	—	—	1
	Northampton,	1	—	—	2
	Somerville,	1	—	—	—
	Worcester,	6	3	3	6
Influenza,	Gardner,	—	1	—	—
	Haverhill,	—	1	2	—
	Somerville,	—	3	—	—
Smallpox,	Fall River,	3	—	1	—

WEEKLY RETURNS OF CASES OF INFECTIOUS DISEASES.

CASES OF INFECTIOUS DISEASES REPORTED DURING THE WEEKS OF JAN.
4, 11, 11, 18 AND 25, 1908.

[Under the provisions of section 52 of chapter 75 of the Revised Laws.]

	WEEK ENDING —			
	Jan. 4.	Jan. 11.	Jan. 18.	Jan. 25.
Diphtheria,	182	168	143	168
Measles,	421	359	513	522
Scarlet fever,	143	127	199	223
Typhoid fever,	23	19	17	18
Phthisis,	105	86	97	111
Cerebro-spinal meningitis,	1	5	5	7
Whooping cough,	12	22	18	34
Smallpox,	—	1	—	1
Varicella,	13	15	6	11

MONTHLY REPORT ON INSPECTION OF FOOD AND DRUGS.

The following summary presents the results of the examination of food and drugs made by the State Board of Health during the month of January, 1908:—

ARTICLES EXAMINED.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.	ARTICLES EXAMINED.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.
Baking powder,	1	—	1	Maple syrup,	3	1	4
Butter,	4	—	4	Meat products:—			
Canned soup, etc.,	10	1	11	Canned meat,	2	2	4
Cheese,	1	—	1	Hamburg steak,	12	1	13
Cider,	14	14	28	Head cheese,	7	0	7
Cocoa,	5	1	6	Lambs' tongues,	1	—	1
Coffee extract,	1	1	2	Mince meat,	3	—	3
Confectionery,	16	—	16	Pressed beef,	2	—	2
Condensed milk,	4	6	10	Sausages,	8	—	8
Drugs,	102	43	145	Milk,	100	118	218
Flavoring ex- tracts:—				Molasses,	1	—	1
Lemon,	1	—	1	Pickles,	5	—	5
Vanilla,	7	3	10	Salad dressing,	3	—	3
Grape juice,	3	1	4	Shrimps,	1	—	1
Honey,	3	—	3	Spices,	4	—	4
Jams and pre- serves,	18	7	25	Table sauce,	7	4	11
Maple sugar,	2	—	2	Vinegar,	4	2	6
				Total,	355	205	560

The samples of drugs found to be adulterated were: alcohol, extract of licorice, fluid extract of ginger, whisky, gin, spirits of camphor, tincture of iodine and several proprietary medicines.

The cities and towns in which samples were collected were: Attleborough, Ayer, Beverly, Boston, Cambridge, Chelsea, Clinton, Everett, Fall River, Fitchburg, Georgetown, Groveland, Haverhill, Hyde Park, Lawrence, Lowell, Lynn, Malden, Medford, Melrose, Norwood, Reading, Salem, Somerville, Stoneham, Warren, Westford, Whitman and Woburn.

PROSECUTIONS FOR VIOLATIONS OF THE LAW RELATING TO FOOD AND DRUGS.

Thirty-five convictions were secured during the month of January, 1908, for selling adulterated food and drugs and preparations containing cocaine, as follows:—

No.	Name of Defendant.	Place.	Character of Article sold.
1	Frederick E. Bruce, . . .	Melrose, . . .	Cider. ¹
2	Nathaniel E. Cutler, . . .	Wakefield, . . .	Cider. ¹
3	John H. Donnelly, . . .	Lowell, . . .	Cider. ²
4	Martin W. Halloran, . . .	Lowell, . . .	Cider.
5	Oliver E. Hawes, . . .	Melrose, . . .	Cider. ¹
6	John J. Kennedy, . . .	Lowell, . . .	Cider. ²
7	Charles G. Sloan, . . .	Arlington, . . .	Cider.
8	Sidney W. Taylor, . . .	Melrose, . . .	Cider. ¹
9	Edw'd L. Hurley (H. Siegel Company).	Boston, . . .	Camphorated oil.
10	Joseph Pezzetti, . . .	Chelsea, . . .	Hamburg steak.
11	George Richards, . . .	Lowell, . . .	Hamburg steak.
12	Eugene W. Benjamin, . . .	Reading, . . .	Maltine with coca wine.
13	Frank B. Case (John A. Morgan Company).	West Medford, . . .	Maltine with coca wine.
14	William E. Conway, . . .	Lowell, . . .	Maltine with coca wine.
15	William E. McLaughlin, . . .	Woburn, . . .	Maltine with coca wine.
16	Alrich B. Swensean, . . .	Melrose, . . .	Maltine with coca wine.
17	George R. Whitcher, . . .	Medford, . . .	Metcalf's coca wine, U.S.P.
18	Peter Alford, . . .	Lawrence, . . .	Milk (total solids, 11.47).
19	John E. Anderson, . . .	Attleborough, . . .	Milk (total solids, 11.07). ¹
20	Archie Dion, . . .	Lawrence, . . .	Milk (total solids, 10.68). ¹
21	Hugo P. Findensen, . . .	Lawrence, . . .	Milk (total solids, 11.74).
22	Theodore Kiessling, . . .	Methuen, . . .	Milk (total solids, 11.46).
23	M. McKenzie, . . .	Essex, . . .	Milk (total solids, 11.68).
24	Ludger Pellevin, . . .	Lawrence, . . .	Milk (total solids, 11.72). ¹
25	Herbert G. Perkins, . . .	Lowell, . . .	Milk (total solids, 11.78).
26	Albert A. Pollard, . . .	Harvard, . . .	Milk (total solids, 10.62). ¹
27	Anthony Rogers, . . .	North Andover, . . .	Milk (total solids, 11.28).
28	Edward Shattuck, . . .	Andover, . . .	Milk (total solids, 11.42).
29	John Sullivan, . . .	Billerica, . . .	Milk (total solids, 11.17).
30	William E. Williams, . . .	Methuen, . . .	Milk (total solids, 11.93).
31	Harry L. Lord, . . .	Chelsea, . . .	Pepper.
32	Edward L. Hurley (H. Siegel Company).	Boston, . . .	Spirits of camphor.
33	Albert J. Soderstrom, . . .	Fitchburg, . . .	Spirits of peppermint. ¹
34	Eugene Harriman, . . .	Boston, . . .	Standard catarrh powder.
35	William B. Burke, . . .	Lowell, . . .	Yellow wax.

¹ Appealed.

² Contained benzoic acid.

LIST OF ADULTERATED OR IMPROPERLY LABELLED FOODS, ETC., FOR JANUARY, 1908.

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
7162	Champagne cider.	J. H. Faight, South Ackworth, N. H.,	Preserved with benzoic acid.
795 O	"London Breakfast" cocoa.	Crown Chocolate Company, Chelsea,	25 per cent. wheat; not correctly labelled.
7214	Coffee extract.	Sage Brothers Company, Portland Street, Boston,	Preserved with benzoic acid.
741 O	"Forest City" vanilla extract.	Forest City Extract Company, Portland, Me.,	Contained coumarin.
793 O	"Leighton's" vanilla extract.	R. G. Leighton, Portland, Me.,	Contained coumarin.
7161	Unfermented grape juice.	Adolph Prince, New York, N. Y.,	Contained 10.38 per cent. alcohol.
7135	Bigarreux Roses au Marasquin, Moray Fils et Cie.	Mihalovitch, Fletcher Company, Cincinnati, O.,	Preserved in sulphurous acid.
7136	"White Swan" Maraschino cherries.	Mihalovitch, Fletcher Company, Cincinnati, O.,	Preserved in sulphurous acid.
823 O	Bigarreux Marasquin.	Rheinstrom, Betterman, Johnson & Co., Cincinnati, O.,	Preserved in sulphurous acid.
7194	"Golden Star" Maraschino cherries.	Mihalovitch, Fletcher Company, Cincinnati, O.,	Preserved in sulphurous acid.
909 O	Bigarreux Roses au Marasquin.	H. F. Laurent & Co.,	Preserved in sulphurous acid.
717 O	"Wild Rose" ketchup.	Not given on package,	Preserved with benzoic acid.
6510 M	"New Process Tomato Catsup."	Gordon & Dilworth, New York, N. Y.,	Preserved with benzoic acid.
7188	"Libby's" Chili sauce.	Libby, McNeill & Libby, Chicago, Ill.,	Preserved with benzoic acid.
7112	"Libby's" tomato catsup.	Libby, McNeill & Libby, Chicago, Ill.,	Preserved with benzoic acid; not properly labelled.
6996	Snider's catsup.	T. A. Snider Preserve Company, Cincinnati, O.,	Preserved with benzoic acid; not properly labelled.
6310 M	Milk.	Benj. E. Harris, Gloucester,	Total solids, 10.36 per cent.; contained added water.
7231	Milk.	Arthur G. Boynton, Lowell,	Total solids, 11.00 per cent.; contained added water.
	Milk.	A. M. Robinson, North Andover,	Total solids, 9.86 per cent.; contained added water.

INSPECTION OF DAIRIES.

During the month of January, 1908, 214 dairies were examined in the following places:—

PLACE.	Number examined.	Number found to present no Objectionable Features.	Per Cent.	Number to which Letters were sent.	Per Cent.
Amherst,	1	1	100.00	—	—
Bridgewater,	18	10	55.56	8	44.44
East Bridgewater,	53	35	66.04	18	33.96
Hanover,	16	11	68.75	5	31.25
Kingston,	7	4	57.14	3	42.86
Marion,	8	6	75.00	2	25.00
Marshfield,	13	9	69.23	4	30.77
Middleborough,	31	22	70.97	9	29.03
Revere,	1	—	—	1	100.00
Wareham,	9	5	55.56	4	44.44
West Bridgewater,	45	24	53.33	21	46.67
Whitman,	12	10	83.33	2	16.67

Total number of dairies examined,	214
Number found to be free from objectionable conditions,	137
Number to which letters were sent,	77
Total number of conditions to which attention was called,	271
Percentage of dairies which passed inspection,	64.01

The names of the owners of the dairies found to be worthy of commendation follow:—

Amherst.

Massachusetts Agricultural College.

East Bridgewater.

Averill, Edward.	Keith & Parker.	Seymour, N. H.
Burhoe, William.	Kennelley, Edward.	Sherman, Henry.
Curtis, Frank.	Mahoney, Daniel.	Snooks, Richard.
East Bridgewater Town Farm.	Millet, Frank.	Taylor, Frank.
Evans, William.	Morehouse, Daniel.	Ward, E. N.
Foyle, H. E.	Nutter Bros.	Washburn & Washburn.
Glover, Frank.	Pratt & Shaw.	Westberg, Arthur.
Goodwin, George A.	Pratt, Wendall.	White, Thomas.
Greene, W. T.	Quill, Mrs. T.	Whitman, Mrs. Emma.
Hazard, Edgar.	Rice, Mrs. K.	Whitmarsh, F. P.
Hodgman, B. J.	Ring, Daniel.	Willis, Gayland.
Joyce, G. M. W.	Setteland, John.	

Hanover.

Barstow, H. B.
 Bray, C. A.
 Callahan, John.
 Church, Samuel.

Donnell, R. C.
 Gardner, W. C.
 Jacobs, James.
 Mann, Joshua S.

Mann, Otis.
 Osborne, John.
 Vining, Henry.

Kingston.

Faunce, Walter H.
 Kennedy, Miss Mary.

Monks, J. R.
 Wright, N. T.

Marion.

Brickett, Rev. H. L.
 Briggs, John.

Dexter, Seth L.
 Hiller Bros.

Luce, Roland L.
 Richards, George F.

Marshfield.

Kent, Herman.
 Osborn, Augustus.
 Osborn, Lucius.

Rogers, Edward.
 Searvens, William.
 Taylor, Leonard.

Thomas, Huntley L.
 Walker, Ephraim H.
 Williamson, Charles H.

Middleborough.

Barrows, Clemmons.
 Boyndon, E. P.
 Braley, Harry.
 Carver, Frank.
 Chadwick, Frank R.
 Deane, John.
 Decker, Leroy C.
 Hall, Frank P.

Johnson, Thomas.
 Kinsmann Bros.
 Mille, Henry S.
 Miner, R. C.
 Pratt, Charles E.
 Pratt, Dudley.
 Pratt, L. B.

Shaw, Charles H.
 Shaw, E. B.
 Shaw, William A.
 Soule & Dean.
 Thomas, E. W.
 Thomas, Henry.
 Wilbur, John.

Wareham.

Bumpus, Edward.
 Hegarty, C.
 Mackie, John.

Meyer, Christian.
 Robbins, F. L.

West Bridgewater.

Anderson, Charles.
 Bartlett, Horace.
 Bennett, Rufus.
 Bergeron, D. J.
 Bragda, Joseph J.
 Carlson, John.
 Copeland, Bradford.
 Copeland Bros.

Dunbar, Edgar.
 Ekland, L.
 Hatch, Robert H.
 Haven, E.
 Howard, Clinton.
 Howard, Frank L.
 Manley, Albert.
 Mills, A.

Ryder, W. F.
 Sands, J. S.
 Simmons, Mrs. D. R.
 Snell, E. T.
 Sullivan, James.
 Thompson, C. H.
 Wood, Frank.
 Woodworth, W. L.

Whitman.

Carleton, E. K.
 Churchill, B. F.
 Gardner, H. C., & Son.
 Morse, C. L.

Prouty, C. S.
 Sharp, Chester H.
 Turner, C. W.

Turner, Davis.
 Vaughan, A. L.
 White, Edwin.

THE MILK QUESTION IN CHICAGO.

As we [New York Medical Journal] said some months ago, it is not New York alone, but every large city as well, that is vitally interested in the question of the quality of its milk supply. The matter has recently met with unusual attention in Chicago, apropos of a committee's report to the Chicago Medical Society. So far as we have been able to ascertain, not a single Chicago physician has sought to perpetuate the delusion that pasteurization is a trustworthy safeguard of the quality of a milk supply. That is more than can be said for the profession of some of our other cities. Pasteurization is at best a makeshift, for it only works some temporary improvement of bad milk, leaving even such milk less nutritious than it was to begin with, and disposing it to changes that still further impair its value as an article of food for adults and as the staple aliment for infants.

The discussion in Chicago seems to have turned largely upon the apparent unwillingness of the people to pay a slightly increased price for pure milk that has been properly handled and promptly delivered in good condition. The blame has been attributed to a very great extent to the thrifty housewife, who is said to regard the exaction of an enhanced price as "robbery." We doubt if this is quite fair; it is generally the father of the household who pays the bills and does the grumbling. However this may be, we have no reason to believe that the people of Chicago will not cheerfully pay well for good milk when they are really convinced that the more expensive article is substantially superior to the product with which they have heretofore been content. Certainly they will not be willing to endanger the health and lives of their children for the sake of saving a cent or more on a quart of milk. Our brethren of Chicago are assuredly doing effective work in bringing their fellow citizens to a realization of the fact that a good article costs more than a poor one.

It is interesting, but quite in accord with common observation, to remark that it is the wealthy who are particularly charged with parsimony in this matter of milk. The rich woman, it is said, will soundly berate her milkman for an advance from 7 to 8 cents a quart, and then betake herself to a fashionable club, where she will unhesitatingly pay \$10 for a luncheon. Perhaps, however, it is the satisfaction that she takes in the denunciation itself, rather than real stinginess, that prompts her; for the domineering spirit which so soon takes possession of the rich finds less resistance among the humble than among those who are

but a few rounds of the ladder lower than the one who does the scolding. But doubtless the wealthy will insist on having the best of milk, and they will certainly have to pay for it. ("New York Medical Journal," Jan. 25, 1908.)

**PROPRIETARY PREPARATIONS CONTAINING COCAINE
ADVERTISED AS UNSALABLE DURING JANUARY, 1908.**

Celerina. Rio Chemical Company, New York.

A No. 1 Catarrh Cure. Standard Remedy Company, Boston, Mass.

**PROPRIETARY COCAINE-CONTAINING PREPARATIONS
ADVERTISED AS UNSALABLE DURING 1907.**

Standard Catarrh Powder. Standard Catarrh Powder Company, Boston.

Dr. Birney's Catarrhal Powder. Birney Catarrhal Powder Company, Chicago, New York.

Crown Catarrhal Powder. Crown Pharmacal Company, New York.

Dr. Agnew's Catarrhal Powder. Anglo-American Medicine Company, Chicago, Toronto, London.

Instant Catarrh Relief; Instant Cold Relief. I. C. R. Medicine Company, Boston.

Dr. Cole's Catarrh Cure. The Cole Medicine Company, London, New York, Chicago.

Pretzinger's Catarrh Balm. R. Pretzinger & Bro., Dayton, O.

Gem Catarrh Powder. Gem Medicine Company, Boston.

Anglo-American Medicine Company's Catarrhal Powder. Anglo-American Medicine Company, Chicago, Toronto.

The Miles Mixture for Catarrh. Miles Medicine Company, Boston.

Opal Catarrh Powder. Standard Remedy Company, Boston.

Reeves' Coca and Tolu Cough Drops. Reeves' Drug and Chemical Company, Cambridge.

Allenbury's Throat Pastilles, No. 9. Allen and Hanbury, Limited, London.

Peruvian Wine of Coca. Keystone Chemical Company, Philadelphia, Pa.

Peruvian Coca Wine. Klein's Pharmacy, Boston.

Mattison's Coca Wine. E. F. Mattison, Providence, R. I.

Metcalf's Coca Wine. Theodore Metcalf Company, Boston.

Dr. Earl's Coca Wine. The New York and Boston Drug Company, New York.

Epstein's Wine of Coca. Epstein's Cut Price Drug Store, Boston.

Green's Coca Wine. Green, the Druggist, Springfield and Worcester.
 Maltine with Coca Wine. Maltine Manufacturing Company, New York.
 Specific for Asthma, Hay Fever and All Catarrhal Diseases of the Respiratory Organs. Nathan Tucker, M.D., Mt. Gilead, O.

Rudolf's Kola Cardinette. Palisade Manufacturing Company, Yonkers, N. Y.

Vin Mariani. Mariani & Co., Paris and New York.

Vin Tonique Mariani. Mariani & Co., 41 Bd. Haussmann, Paris.

Quina-Laroche. T. Laroche, Rue des Fossés St. Jacques, Paris.

HEADACHE CURES EXAMINED DURING JANUARY, 1908.

Eames' Celery Crackers for Headaches. W. M. Eames, Manchester, N. H.
 "A simple, scientific combination of Celery, Pepsin, Soda, etc., by advice of a physician. Does *not* contain Bromide, Chloral, Cocaine, any form of Opium, or any other objectionable drug, and has *no* depressing action upon the heart. They are *absolutely safe and harmless*. Even a child can take one."

Examination demonstrated the presence of acetanilid. No statement to that effect on the label, although required by the federal law.

Laxacold. New York and London Drug Co., New York, N. Y. "A laxative tablet treatment for coughs, colds, grippe, headache and neuralgia."

Each tablet contains 2 grains of acetanilid (so stated on the label).

Ellis' No. 2 Cold Cure. Curtis & Ellis, Lynn, Mass. "Cures grip or cold in one day."

Contains acetanilid, the presence of which is not stated on the label.

Premium Remedy. For Colds and Lagrippe. A. D. S. Cold and Grippe. American Druggists' Syndicate, Distributors, main offices, New York.

Contains acetanilid (so stated on the label).

Magic Headache Wafers. "A sure cure for nearly every form of headache. They are especially valuable in sick, nervous and periodic headache, brain fag and mental weariness." "Not to be given to infants." Prepared only by Walter A. DeWire, Pittsfield.

Contains acetanilid; presence not stated.

Shac. Stearns's Head Ache Cure. Stearns & Curtius, Inc., 5 Platt Street, New York.

Each wafer contains four grains of acetanilid (so stated, somewhat indistinctly, on label).

Dr. Kohler's Antidote for Headache and Neuralgia. Kohler Manufacturing Company, Baltimore, Md.

Contains phenacetin (so stated on label, but employing the less commonly known word "acetphenetidine").

Danbury's Headache Tablets. "Guaranteed to cure a headache in 15 minutes. Directions. Adults one tablet, with a swallow of water; repeat in 30 minutes if necessary. Children half the amount." Danbury Remedy Co., Albany, N. Y.

Analysis revealed phenacetin.

FATAL POISONING BY PHENACETIN IN HEADACHE TABLETS.

The facts of the following case of fatal poisoning are furnished by Dr. George L. Tobey of Clinton, Mass., medical examiner of the fourth Worcester district:—

On Friday, Dec. 13, 1907, at 9.20 P.M., a girl of sixteen and a half years, in good general health, but having a headache and a feeling that she had taken cold, took two headache tablets and went to bed. Later, her mother heard her coughing and went to her. There was nothing at this time to cause alarm, but a little before 11 o'clock the girl's lips and face began to become blue, and in consequence a physician was sent for. He responded at once, and found the girl with great weakness of the heart and œdema of the lungs. Before he could administer any remedy she was dead.

The box with the remaining tablets was sent to the office of the State Board of Health for examination. The tablets were found to contain phenacetin. The box was labelled "Danbury's Headache Tablets."

CASE OF POISONING BY ACETANILID IN HEADACHE POWDERS (SHAC).¹

Relative to the article in the Journal² on Stearns's headache cure (Shac), I report the following case of poisoning as the result of the use of this preparation by a patient who recently came under my care:—

¹ A. M. Rooker, M.D., Niagara Falls, N. Y., in "Journal of the American Medical Association," Nov. 16, 1907.

² Oct. 19, 1907, 1381.

History. — Mrs. S., aged forty-five, who had often suffered from headache, but had never previously taken any proprietary remedies for its relief, was induced to take a Stearns's headache wafer by her daughter, who had been using them. About half an hour after taking it she began to feel faint and dizzy, and in another half hour had lapsed into total unconsciousness.

Examination. — When seen the patient was still unconscious. The face was somewhat cyanotic, skin was moist, pupils were normal, respiration was slow and shallow, pulse was of fairly good quality, though increased in frequency; the pulmonary second sound was greatly accentuated.

Treatment. — Under full doses of strychnin and atropin hypodermatically, rectal injections of black coffee and the application of heat externally, consciousness returned in about an hour, having persisted for about two and one-half hours. The patient remained dull and stupid and somewhat cyanotic for some time. She complained of still having a violent headache and of feeling very weak. The headache was relieved by active purgation, hot mustard foot-bath and mustard paste to back of neck, but the weakness lasted thirty-six hours longer.

What the outcome might have been without the administration of stimulants I cannot say, but of the harmfulness (not "harmless," as Stearns & Co. advertise) of this remedy I am most fully convinced.

FREE DISTRIBUTION OF HARMFUL DRUGS.

In the November, 1907, "Monthly Bulletin" was printed chapter 180 of the Acts of 1907, relative to the distribution of free samples of harmful drugs, and the fact that four men had paid fines of \$50 each in the East Boston district court, for distributing free samples of "Hill's Cascara Bromide Quinine." On December 9 the following letter was sent by the manufacturers of the above-named preparation, the W. H. Hill Company of Detroit, Mich., to an individual whose business is the distribution of advertising matter. It may be observed that there is nothing in the law which empowers police authorities to decide whether or not a drug may be harmful, and that the objectionable drug in question is acetanilid. The communication indicates to what extent preparations of this class are advertised by the free-sample, house-to-house method.

DETROIT, MICH., 12-9-07.

DEAR SIR: — In reply to your favor of recent date, in which you state if you could satisfy the police that Hill's C. B. Q. Tablets were not harmful, you could put out the balance of the samples, would say, in this connection, if

you will take one of these samples, or a regular box of Tablets, to Police headquarters, or to anybody you desire, and ask them to put one of the Tablets in their mouth, and bite it, they will readily see that no child would take one of the Tablets, and swallow it.

Even if they did, there are only four Tablets in each sample, and there is nothing in four tablets that will harm anybody.

However, it is easy to demonstrate to the Police, or to the proper authority, that no child, or any person, will take these Tablets, and chew them, because they are so very bitter, they could not do it, and, as everyone knows, a child will invariably spit out anything that is at all bitter.

We can send you affidavits of some of the best physicians in the country, that there is nothing in Hill's C. B. Q. that will harm anyone, when taken anywhere within the bounds of reason, to say nothing about taking according to directions.

Of course, there are laxative drugs in the Tablets, as well as others, and if one should take a whole box at once, it might prove injurious on the same principle as it would if one should drink ten gallons of water when one glass would be all that was needed. That is the only way anybody can be harmed by taking our Tablets.

For the last eight years, we have distributed from eight to twelve millions of these samples each year in the towns in the U. S., and up to this time, we have never had one complaint of any child, or person, being injured or harmed in any way. The fact is we have distributed Boston, and vicinity, as well as the entire New England states, for the past six years.

If you put this matter up to the proper authorities in this light, we think they will be disposed to be fair, and will let you continue the distribution. We know what we are talking about when we tell you that these samples are not harmful.

Yours very truly,

W. H. H.

W. H. HILL Co.

MONTHLY BULLETIN

OF THE

STATE BOARD OF HEALTH

OF

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WEEKLY RETURNS OF DEATHS FROM CITIES AND TOWNS
OF MORE THAN 10,000 POPULATION.

WEEK ENDING FEB. 1, 1908.

CITIES AND TOWNS.	Population. ¹ Esti- mated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —						
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.	
Boston,	617,082	247	69	32	58	21	3	1	2	
Worcester,	134,341	50	16	10	8	7	2	-	-	
Fall River,	106,305	80	35	12	24	4	-	-	-	
Cambridge,	100,922	32	10	2	6	2	-	-	-	
Lowell,	96,380	33	9	2	8	2	-	-	-	
Lynn,	82,661	26	5	4	-	1	1	-	1	
New Bedford,	82,580	28	13	4	5	2	-	-	-	
Springfield,	81,425	29	6	3	6	2	1	-	-	
Lawrence,	78,000	24	8	4	4	2	-	-	-	
Somerville,	74,295	13	1	2	2	1	-	1	-	
Brockton,	53,131	12	2	2	-	1	-	-	-	
Holyoke,	52,652	28	11	7	7	2	3	-	-	
Malden,	40,929	12	-	-	-	-	-	-	-	
Chelsea,	39,363	12	2	2	2	2	-	-	-	
Newton,	38,919	7	2	-	1	-	-	-	-	
Salem,	38,666	13	4	5	-	4	-	-	-	
Haverhill,	38,228	16	3	7	-	2	-	-	2	
Fitchburg,	33,948	9	6	1	1	1	-	-	-	
Everett,	32,415	6	1	1	-	1	-	-	-	
Taunton,	30,967	7	2	1	1	1	-	-	-	
Quincy,	30,924	5	1	1	-	1	-	-	-	
Waltham,	28,120	4	1	-	1	-	-	-	-	
Pittsfield,	27,168	8	3	-	3	-	-	-	-	
Gloucester,	26,011	7	1	1	-	1	-	-	-	
Brookline,	25,825	4	-	1	-	1	-	-	-	
North Adams,	22,150	5	1	2	-	1	1	-	-	
Chicopee,	20,831	7	3	2	2	-	1	-	-	
Northampton,	20,789	11	3	1	-	1	-	-	-	
Medford,	20,605	7	1	1	1	1	-	-	-	
Beverly,	16,088	2	1	-	-	-	-	-	-	
Leominster,	15,578	3	-	-	1	-	-	-	-	
Hyde Park,	15,327	0	-	-	-	-	-	-	-	
Melrose,	15,160	10	2	-	1	-	-	-	-	
Newburyport,	14,794	-	-	-	-	-	-	-	-	
Woburn,	14,492	9	1	2	1	1	-	-	-	
Westfield,	14,457	2	-	-	2	-	-	-	-	
Marlborough,	14,359	8	2	1	-	1	-	-	-	
Revere,	14,248	1	-	-	1	-	-	-	-	
Attleborough,	13,600	3	1	-	-	-	-	-	-	
Peabody,	14,144	-	-	-	-	-	-	-	-	
Adams,	13,375	6	3	1	2	1	-	-	-	
Clinton,	13,105	6	2	-	-	-	-	-	-	
Gardner,	12,794	-	-	-	-	-	-	-	-	
Milford,	12,565	3	1	1	-	1	-	-	-	
Watertown,	12,306	6	2	2	1	-	-	-	-	
Plymouth,	12,149	-	-	-	-	-	-	-	-	
Weymouth,	11,744	6	0	-	1	-	-	-	-	
Framingham,	11,698	2	-	-	1	-	-	-	-	
Southbridge,	11,630	-	-	-	-	-	-	-	-	
Wakefield,	10,903	-	-	-	-	-	-	-	-	
Webster,	10,825	-	-	-	-	-	-	-	-	
Arlington,	10,307	0	-	-	-	-	-	-	-	

Recapitulation.

Total of reporting towns, . .	2,294,041	809	234	117	151	68	12	2	5
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¹ The populations were estimated upon the rate of growth from 1900 to 1905. Those of Taunton, Gloucester, North Adams and Clinton were allowed to stand as in 1905, having shown no increase during the five-year period. The gain in the population of Lowell is due to the annexation of a part of the town of Tewksbury. The population of Lawrence by the census of 1905 was 70,050, but, owing to the building of the new Wood and Arlington mills, employing at present some 3,000 operatives, an increase of about 8,000 is estimated by the Lawrence board of health, or 78,000.

WEEK ENDING FEB. 8, 1908.

CITIES AND TOWNS.	Population. Esti- mated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	617,082	242	78	32	43	20	2	1	—
Worcester,	134,341	55	16	8	3	3	1	—	—
Fall River,	106,305	59	31	10	21	1	1	—	2
Cambridge,	100,922	27	7	6	1	3	2	—	—
Lowell,	96,380	49	17	8	14	5	1	1	—
Lynn,	82,661	22	10	4	—	—	3	—	1
New Bedford,	82,580	39	22	6	13	4	—	—	—
Springfield,	81,425	35	2	—	9	—	—	—	—
Lawrence,	78,000	30	7	4	7	3	—	—	—
Somerville,	74,295	20	7	—	5	—	—	—	—
Brockton,	53,131	17	3	1	3	—	—	1	—
Holyoke,	52,652	21	6	5	7	1	2	—	—
Malden,	40,929	10	5	—	—	—	—	—	—
Chelsea,	39,363	9	3	1	3	1	—	—	—
Newton,	38,919	9	1	1	—	—	—	—	—
Salem,	38,666	18	5	2	—	2	—	—	—
Haverhill,	38,228	13	5	3	3	2	—	—	1
Fitchburg,	33,948	13	2	3	5	1	2	—	—
Everett,	32,415	5	2	—	—	—	—	—	—
Taunton,	30,967	13	3	2	3	2	—	—	—
Quincy,	30,924	10	3	—	1	—	—	—	—
Waltham,	28,120	4	2	2	2	2	—	—	—
Pittsfield,	27,168	9	0	2	3	1	—	—	—
Gloucester,	26,011	7	—	—	3	—	—	—	—
Brookline,	25,825	8	—	1	—	1	—	—	—
North Adams,	22,150	8	2	1	2	—	—	—	—
Chicopee,	20,831	6	3	1	—	1	—	—	—
Northampton,	20,789	12	0	—	1	—	—	—	—
Medford,	20,605	8	1	2	4	2	—	—	—
Beverly,	16,088	2	—	1	—	1	—	—	—
Leominster,	15,578	2	—	—	—	—	—	—	—
Hyde Park,	15,327	7	2	1	—	1	—	—	—
Melrose,	15,160	1	0	—	—	—	—	—	—
Newburyport,	14,794	—	—	—	—	—	—	—	—
Woburn,	14,492	3	0	2	1	1	—	—	—
Westfield,	14,457	3	—	1	—	1	—	—	—
Marlborough,	14,359	4	1	—	—	—	—	—	—
Revere,	14,248	4	1	2	1	1	—	—	1
Attleborough,	13,600	5	1	—	—	—	—	—	—
Peabody,	14,144	—	—	—	—	—	—	—	—
Adams,	13,375	2	—	—	—	—	—	—	—
Clinton,	13,105	4	1	—	—	—	—	—	—
Gardner,	12,794	4	1	1	—	—	—	—	—
Milford,	12,565	5	—	1	2	1	—	—	—
Watertown,	12,306	4	3	1	—	1	—	—	—
Plymouth,	12,149	—	—	—	—	—	—	—	—
Weymouth,	11,744	3	1	—	1	—	—	—	—
Framingham,	11,698	6	2	—	2	—	—	—	—
Southbridge,	11,630	5	2	—	1	—	—	—	—
Wakefield,	10,903	—	—	—	—	—	—	—	—
Webster,	10,825	—	—	—	—	—	—	—	—
Arlington,	10,307	2	—	—	—	—	—	—	—

Recapitulation.

Total of reporting towns, .	2,318,465	844	258	115	164	62	14	3	5
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WEEK ENDING FEB. 15, 1908.

CITIES AND TOWNS.	Population. Estimated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	617,082	243	68	28	56	20	1	1	1
Worcester,	134,341	58	15	7	7	4	1	—	—
Fall River,	106,305	59	22	10	16	4	2	—	1
Cambridge,	100,922	35	6	4	7	3	—	—	—
Lowell,	96,380	45	11	7	9	5	1	—	—
Lynn,	82,661	22	6	2	—	—	—	—	—
New Bedford,	82,580	27	14	3	6	1	—	—	—
Springfield,	81,425	20	6	3	3	1	—	—	—
Lawrence,	78,000	28	13	3	8	1	—	—	1
Somerville,	74,295	21	4	2	6	1	—	—	—
Brockton,	53,131	10	2	2	1	2	—	—	—
Holyoke,	52,652	22	5	1	6	1	—	—	—
Malden,	40,929	15	1	3	1	3	—	—	—
Chelsea,	39,363	18	4	4	5	3	1	—	—
Newton,	38,919	15	3	3	1	2	—	—	—
Salem,	38,666	22	8	4	—	2	1	—	—
Haverhill,	38,228	15	1	6	3	6	—	—	—
Fitchburg,	33,948	13	3	2	3	1	1	—	—
Everett,	32,415	13	6	3	—	—	2	—	—
Taunton,	30,967	12	3	1	3	1	—	—	—
Quincy,	30,924	3	—	—	—	—	—	—	—
Waltham,	28,120	4	2	2	—	—	—	—	1
Pittsfield,	27,168	9	—	—	4	—	—	—	—
Gloucester,	26,011	11	1	1	—	1	—	—	—
Brookline,	25,825	8	2	2	1	—	—	1	1
North Adams,	22,150	3	—	—	—	—	—	—	—
Chicopee,	20,831	9	4	1	3	—	—	—	—
Northampton,	20,789	6	1	1	—	—	—	—	—
Medford,	20,605	4	3	2	—	1	—	—	—
Beverly,	16,088	4	1	—	—	—	—	—	—
Leominster,	15,578	1	—	—	—	—	—	—	—
Hyde Park,	15,327	4	—	—	2	—	—	—	—
Melrose,	15,160	2	1	—	—	—	—	—	—
Newburyport,	14,794	—	—	—	—	—	—	—	—
Woburn,	14,492	2	1	—	—	—	—	—	—
Westfield,	14,457	7	1	1	2	1	—	—	—
Marlborough,	14,359	6	2	2	2	2	—	—	—
Revere,	14,248	1	—	1	—	—	1	—	—
Attleborough,	13,600	4	1	—	—	—	—	—	—
Peabody,	14,144	—	—	—	—	—	—	—	—
Adams,	13,375	6	2	—	2	—	—	—	—
Clinton,	13,105	4	1	1	—	1	—	—	—
Gardner,	12,794	4	2	1	—	—	—	—	—
Milford,	12,565	11	3	2	1	2	—	—	—
Watertown,	12,306	3	1	1	—	1	—	—	—
Plymouth,	12,149	—	—	—	—	—	—	—	—
Weymouth,	11,744	1	1	—	—	—	—	—	—
Framingham,	11,698	6	—	—	1	—	—	—	—
Southbridge,	11,630	2	—	1	—	1	—	—	—
Wakefield,	10,903	—	—	—	—	—	—	—	—
Webster,	10,825	—	—	—	—	—	—	—	—
Arlington,	10,307	3	—	1	—	1	—	—	—

Recapitulation.

Total of reporting towns,	2,318,465	841	231	118	159	72	11	2	5
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WEEK ENDING FEB. 22, 1908.

CITIES AND TOWNS.	Population. Est- imated for 1908.	Reported Deaths In Each.	Deaths under Five Years.	DEATHS FROM —						
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.	
Boston,	617,082	218	61	36	60	22	4	-	-	-
Worcester,	134,341	42	12	9	9	4	-	-	-	1
Fall River,	106,305	55	28	13	10	2	-	-	-	9
Cambridge,	100,922	29	9	6	5	2	2	1	-	-
Lowell,	96,380	44	17	5	16	3	-	-	-	-
Lynn,	82,661	34	9	4	-	2	1	-	-	-
New Bedford,	82,580	24	10	4	2	1	-	-	-	-
Springfield,	81,425	26	3	6	4	4	1	-	-	-
Lawrence,	78,000	30	6	5	8	2	-	1	-	-
Somerville,	74,295	21	3	1	8	-	-	-	-	-
Brockton,	53,131	18	5	3	3	2	1	-	-	-
Holyoke,	52,652	17	8	4	2	2	-	-	-	-
Malden,	40,929	13	2	1	-	-	1	-	-	-
Chelsea,	39,363	10	4	3	2	1	1	-	-	-
Newton,	38,919	5	1	-	-	-	-	-	-	-
Salem,	38,666	10	2	-	-	-	-	-	-	-
Haverhill,	38,228	12	1	1	4	1	-	-	-	-
Fitchburg,	33,948	6	1	-	2	-	-	-	-	-
Everett,	32,415	7	2	-	-	-	-	-	-	-
Taunton,	30,967	12	2	1	5	-	-	1	-	-
Quincy,	30,924	4	1	1	1	1	-	-	-	-
Waltham,	28,120	7	1	-	-	-	-	-	-	-
Pittsfield,	27,168	7	1	2	3	2	-	-	-	-
Gloucester,	26,011	-	-	-	-	-	-	-	-	-
Brookline,	25,825	2	0	-	1	-	-	-	-	-
North Adams,	22,150	7	1	1	-	-	-	-	-	-
Chicopee,	20,831	13	9	5	-	2	-	-	-	-
Northampton,	20,789	8	1	1	1	-	-	-	-	-
Medford,	20,605	7	0	1	1	1	-	-	-	-
Beverly,	16,088	4	-	-	-	-	-	-	-	-
Leominster,	15,578	-	-	-	-	-	-	-	-	-
Hyde Park,	15,327	2	-	-	-	-	-	-	-	-
Melrose,	15,160	4	0	-	1	-	-	-	-	-
Newburyport,	14,794	-	-	-	-	-	-	-	-	-
Woburn,	14,492	3	1	-	-	-	-	-	-	-
Westfield,	14,457	2	-	1	-	1	-	-	-	-
Marlborough,	14,359	11	1	1	1	1	-	-	-	-
Revere,	14,248	2	-	-	-	-	-	-	-	-
Attleborough,	13,600	3	0	-	-	-	-	-	-	-
Peabody,	14,144	-	-	-	-	-	-	-	-	-
Adams,	13,375	-	-	-	-	-	-	-	-	-
Clinton,	13,105	1	0	-	-	-	-	-	-	-
Gardner,	12,794	-	-	-	-	-	-	-	-	-
Milford,	12,565	5	-	3	1	2	-	-	-	-
Watertown,	12,306	1	0	-	-	-	-	-	-	-
Plymouth,	12,149	-	-	-	-	-	-	-	-	-
Weymouth,	11,744	8	0	-	2	-	-	-	-	-
Framingham,	11,698	5	-	-	1	-	-	-	-	-
Southbridge,	11,630	9	3	2	1	2	-	-	-	-
Wakefield,	10,903	-	-	-	-	-	-	-	-	-
Webster,	10,825	-	-	-	-	-	-	-	-	-
Arlington,	10,307	2	-	-	-	-	-	-	-	-

Recapitulation.

Total of reporting towns, .	2,250,707	750	205	120	154	60	11	3	10
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WEEK ENDING FEB. 29, 1908.

CITIES AND TOWNS.	Population. Estimated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —						
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.	
Boston,	617,082	237	69	37	53	21	5	—	3	
Worcester,	134,341	50	8	12	7	8	1	—	—	
Fall River,	106,305	59	28	11	16	2	1	—	2	
Cambridge,	100,922	24	5	6	2	3	1	2	—	
Lowell,	96,380	43	14	3	12	2	1	—	—	
Lynn,	82,661	31	13	9	—	3	2	1	1	
New Bedford,	82,580	47	22	5	13	4	—	—	—	
Springfield,	81,425	28	7	3	4	1	—	—	—	
Lawrence,	78,000	30	14	6	7	4	1	1	—	
Somerville,	74,295	20	4	2	7	2	—	—	—	
Brockton,	53,131	20	4	3	3	2	1	—	—	
Holyoke,	52,652	18	6	6	1	3	1	—	—	
Malden,	40,929	10	2	2	1	1	—	1	—	
Chelsea,	39,363	8	4	1	—	1	—	—	—	
Newton,	38,919	9	2	3	2	3	—	—	—	
Salem,	38,666	14	1	1	—	1	—	—	—	
Haverhill,	38,228	7	—	2	—	2	—	—	—	
Fitchburg,	33,948	12	3	—	3	—	—	—	—	
Everett,	32,415	3	1	1	—	1	—	—	—	
Taunton,	30,967	22	2	1	2	1	—	—	—	
Quincy,	30,924	4	—	1	—	—	—	—	—	
Waltham,	28,120	5	—	1	—	1	—	—	—	
Pittsfield,	27,168	8	2	—	4	—	—	—	—	
Gloucester,	26,011	9	2	—	—	—	—	—	—	
Brookline,	25,825	8	1	—	2	—	—	—	—	
North Adams,	22,150	4	1	—	1	—	—	—	—	
Chicopee,	20,831	8	3	1	2	1	—	—	—	
Northampton,	20,789	9	2	—	2	—	—	—	—	
Medford,	20,605	4	1	—	—	—	—	—	—	
Beverly,	16,088	6	—	1	1	—	—	1	—	
Leominster,	15,578	2	—	—	—	—	—	—	—	
Hyde Park,	15,327	7	5	—	2	—	—	—	—	
Melrose,	15,160	8	1	1	1	1	—	—	—	
Newburyport,	14,794	—	—	—	—	—	—	—	—	
Woburn,	14,492	2	0	1	—	1	—	—	—	
Westfield,	14,457	8	2	—	2	—	—	—	—	
Marlborough,	14,359	6	2	1	—	1	—	—	—	
Revere,	14,248	1	1	—	1	—	—	—	—	
Attleborough,	13,600	3	0	—	1	—	—	—	—	
Peabody,	14,144	—	—	—	—	—	—	—	—	
Adams,	13,375	2	1	1	—	—	—	—	—	
Clinton,	13,105	1	—	—	—	—	—	—	—	
Gardner,	12,794	5	1	1	—	1	—	—	—	
Milford,	12,565	2	—	—	1	—	—	—	—	
Watertown,	12,306	8	3	2	3	1	—	—	—	
Plymouth,	12,149	—	—	—	—	—	—	—	—	
Weymouth,	11,744	4	—	—	—	—	—	—	—	
Framingham,	11,698	1	—	—	—	—	—	—	—	
Southbridge,	11,630	4	4	—	—	—	—	—	—	
Wakefield,	10,903	—	—	—	—	—	—	—	—	
Webster,	10,825	—	—	—	—	—	—	—	—	
Arlington,	10,307	2	—	—	—	—	—	—	—	

Recapitulation.

Total of reporting towns,	2,318,465	823	241	125	156	72	14	6	6
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WEEKLY RETURNS OF DEATHS FROM CERTAIN INFECTIOUS DISEASES.

DEATHS FROM INFECTIOUS DISEASES NOT SPECIFICALLY MENTIONED IN ABOVE TABLES DURING THE WEEKS OF FEB. 1, 8, 15, 22 AND 29, 1908.

DISEASE.	Place.	WEEK ENDING --				
		Feb. 1.	Feb. 8.	Feb. 15.	Feb. 22.	Feb. 29.
Cerebro-spinal meningitis, .	Boston, . .	2	2	1	—	2
	Adams, . .	—	—	—	—	1
	Cambridge, . .	—	—	—	1	—
	Chicopee, . .	—	—	—	1	—
	Holyoke, . .	1	2	—	—	—
	Lowell, . .	—	—	1	1	—
	Lynn, . .	1	—	1	1	—
	Newton, . .	—	1	—	—	—
	New Bedford, . .	—	—	—	2	—
Erysipelas,	No. Adams, . .	—	—	—	1	—
	Quincy, . .	—	—	—	—	1
	Boston, . .	1	1	—	1	1
	Lawrence, . .	1	—	—	—	—
	Lowell, . .	—	1	—	1	—
	New Bedford, . .	1	1	—	—	—
	Salem, . .	—	—	1	—	—
	Springfield, . .	—	—	—	—	1
	Worcester, . .	—	—	1	—	1
Whooping cough,	Boston, . .	—	1	2	2	2
	Everett, . .	—	—	1	—	—
	Fall River, . .	—	—	1	—	—
	Gardner, . .	—	1	1	—	—
	Lawrence, . .	—	1	1	2	—
	Lynn, . .	—	—	1	—	2
	Northampton, . .	—	—	1	1	—
	Salem, . .	1	—	—	—	—
	Watertown, . .	1	—	—	—	—
Scarlet fever,	Woburn, . .	1	—	—	—	—
	Boston, . .	—	1	1	3	—
	Cambridge, . .	—	1	1	—	—
	Chelsea, . .	—	—	—	1	—
	Chicopee, . .	1	—	1	2	—
	Fall River, . .	2	3	—	—	1
	Holyoke, . .	—	—	—	2	1
	Newton, . .	—	—	1	—	—
	New Bedford, . .	1	—	2	—	—
Influenza,	Pittsfield, . .	—	1	—	—	—
	Springfield, . .	—	—	1	1	—
	Worcester, . .	1	1	1	1	1
	Boston, . .	—	—	—	—	—
	Watertown, . .	1	—	—	—	1
	Fall River, . .	—	1	—	—	—
	Lowell, . .	—	—	—	—	—
	Springfield, . .	—	—	—	—	—
	Worcester, . .	—	—	—	—	—
Smallpox,	Fall River, . .	—	1	—	—	—
	Worcester, . .	—	—	—	—	—

WEEKLY RETURNS OF CASES OF INFECTIOUS DISEASES.

CASES OF INFECTIOUS DISEASES REPORTED DURING THE WEEKS OF FEB.
1, 8, 15, 22 AND 29, 1908.

[Under the provisions of section 52 of chapter 75 of the Revised Laws.]

	WEEK ENDING —				
	Feb. 1.	Feb. 8.	Feb. 15.	Feb. 22.	Feb. 29.
Diphtheria,	224	147	139	147	127
Measles,	415	595	517	606	729
Scarlet fever,	251	173	173	237	263
Typhoid fever,	22	17	20	17	23
Phthisis,	159	97	93	103	118
Cerebro-spinal meningitis,	6	11	16	5	4
Whooping cough,	15	7	17	22	22
Varicella,	14	11	13	27	29
Tetanus,	1	1	—	—	—
Erysipelas,	1	2	—	—	1
Ophthalmia neonatorum,	—	—	1	—	3
Mumps,	—	—	—	—	1
Actinomycosis,	1	—	—	—	—

MONTHLY REPORT ON INSPECTION OF FOOD AND DRUGS.

The following summary presents the results of the examination of food and drugs made by the State Board of Health during the month of February, 1908:—

ARTICLES EXAMINED.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.	ARTICLES EXAMINED.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.
Buckwheat flour,	1	—	1	Meat products:—			
Butter,	1	—	1	Canned meat,	3	—	3
Canned goods,	5	—	5	Head cheese,	4	—	4
Confectionery,	4	—	4	Hamburg steak,	15	8	23
Condensed milk,	4	—	4	Mince meat,	1	—	1
Drugs,	147	68	215	Milk,	64	81	145
Flavoring extracts:—				Sausages,	10	—	10
Lemon,	—	1	1	Molasses,	2	—	2
Orange,	—	1	1	Raspberry cordial,	1	—	1
Vanilla,	4	—	4	Eggs, broken and mixed,	1	—	1
Grape juice,	2	—	2	Olives,	1	—	1
Honey,	3	—	3	Pickles,	8	—	8
Jams, jellies and preserves,	15	3	18	Celery salt,	5	6	11
Lard,	—	1	1	Soda syrups,	2	—	2
Malt liquors,	2	—	2	Table sauces,	3	3	6
Maple sugar,	3	2	5	Vinegar,	3	—	3
Maple syrup,	1	—	1	Wine,	2	—	2
				Total,	317	174	491

The samples of drugs found to be adulterated were: alcohol, peroxide of hydrogen, fluid extract of ginger, camphor liniment, borax, whiskey, spirit of peppermint, tincture of iodine and several proprietary medicines.

The cities and towns in which samples were collected were: Boston, Brookfield, Chelsea, Everett, Framingham, Gardner, Hudson, Lawrence, Lowell, Lynn, Malden, Marlborough, Newburyport, Northampton, Peabody, Taunton, Waltham, Woburn and Worcester.

PROSECUTIONS FOR VIOLATIONS OF THE LAW RELATING TO FOOD AND DRUGS.

Forty-six convictions were secured during the month of February, 1908, for selling adulterated food and drugs and preparations containing cocaine, as follows:—

No.	Name of Defendant.	Place.	Character of Article sold.
1	Abram Berkman,	Boston,	Alcohol; 76.43 per cent.
2	Henry C. Cobe,	Boston,	Alcohol; 84.04 per cent.
3	Isaac Cartrof,	Boston,	Alcohol; 50.82 per cent.
4	Duncan A. Chisholm,	Boston,	Alcohol.
5	Daniel F. Conlin,	Lawrence,	Alcohol; 75.12 per cent.
6	Thomas Cox,	Boston,	Alcohol; 84.41 per cent.
7	Thomas F. Doherty,	Boston,	Alcohol. ¹
8	John Ford,	Lawrence,	Alcohol; 80.52 per cent.
9	Jesse Goode,	Boston,	Alcohol; 71.34 per cent. ¹
10	Israel Goldstein,	Boston,	Alcohol; 79.86 per cent.
11	William B. Huber,	Boston,	Alcohol; 72.22 per cent. ¹
12	Simon Flashman,	Boston,	Alcohol; 79.42 per cent.
13	Henry F. Joyce,	Boston,	Alcohol; 81.72 per cent.
14	Mark H. Creehan,	Boston,	Alcohol; 50.62 per cent.
15	John McWeeny,	Boston,	Alcohol; 71.82 per cent. ¹
16	Myer Myers,	Boston,	Alcohol; 62.88 per cent.
17	Joseph C. Oxley,	Reading,	Alcohol; 74.17 per cent.
18	Adolph G. Pearce,	Boston,	Alcohol.
19	Frederick A. Perry,	Boston,	Alcohol; 72.29 per cent.
20	Andrew F. Pendergast,	Boston,	Alcohol; 70.40 per cent. ¹
21	Solomon Pinkofsky,	Boston,	Alcohol; 59.01 per cent.
22	Frederick F. Ryan,	Dorchester,	Alcohol; 72.84 per cent.
23	Harry Staples,	Boston,	Alcohol; 87.61 per cent.
24	Jacob Swartz,	Boston,	Alcohol; 86.35 per cent.
25	John Tobin,	Boston,	Alcohol; 44.43 per cent. ¹
26	Ike Zeigler,	Boston,	Alcohol; 68.07 per cent.
27	Harry G. Blanchard,	Boston,	Cider; benzoic acid.
28	Joseph J. Curran,	Boston,	Cider; benzoic acid. ¹
29	John J. Coffey,	Cambridge,	Cider; benzoic acid.
30	Clarence W. Golthwait,	Somerville,	Cider; benzoic acid.
31	John F. Henry,	Boston,	Cider; benzoic acid. ¹
32	Clarence H. Hobden,	Chelsea,	Cider; benzoic acid.
33	Charles H. Joyce,	Lowell,	Cider; benzoic acid.
34	Venna F. Lott,	Boston,	Cider; benzoic acid.
35	Middlesex Grocery Co.,	Lowell,	Cider; benzoic acid.
36	Eugene F. McAuliffe,	Boston,	Cider; benzoic acid. ¹
37	George A. Wells,	Salem,	Cider; benzoic acid. ¹
38	Melvin B. Buckley,	Boston,	Standard catarrh powder.

¹ Appealed.

No.	Name of Defendant.	Place.	Character of Article sold.
39	Joseph McGrau,	Boston,	C a t a r r h powder; un- labeled. ¹
40	Thomas Dean,	Boston,	Grape juice; contained salicylic acid.
41	Edward O. Harlow,	Ayer,	Hamburg steak; contained sulphurous acid.
42	John A. Frye,	Gardner,	Milk (total solids, 11.88).
43	Harris Goldberg,	West Warren,	Milk (total solids, 11.80).
44	Joseph P. Hubert,	West Warren,	Milk (total solids, 11.80).
45	William Leach,	Westminster,	Milk (total solids, 10.77).
46	Frederick L. Pratt,	Boston,	Spirits of camphor.

¹ Appealed.

Fines imposed, \$1,205.

LIST OF ADULTERATED OR IMPROPERLY LABELLED FOODS, ETC., FOR FEBRUARY, 1908.

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
921 O	Celery salt, . . . Celery salt, . . . Celery salt, . . . Celery salt, . . . Celery salt, . . . Celery salt, . . . Celery salt, . . . "Gold" evaporated milk, Preserved raspberries, . "Pride of The Farm" chili sauce. "Columbia" chili sauce, "Armour's Tomato Bouillon."	A. Colburn Company, Philadelphia, Pa., . . . Sparhawk, Poole & Co., London, E. C., . . . Bennett, Simpson & Co., London, E. C., . . . Cobb Bates & Yerxa Company, Boston, Mass., . . . The Horton, Cato Manufacturing Company, Detroit, Mich. Haskell, Adams & Co., Boston, . . . Hires Condensed Milk Company, Philadelphia, Pa., . . . Dunklay Preserving Company, Kalamazoo, Mich., . . . E. Prichard, N. Y., . . . The Mullen-Blackledge Company, Indianapolis, Ind., . . . Armour & Co., Chicago, . . . H. K. Wampole & Co., Philadelphia, Pa., . . . Napier Chemical Company, N. Y., . . . Standard Remedy Company, Boston, Mass., . . . M. A. McGale, Rouse's Point, N. Y., . . . Klinck Catarrh and Bronchial Remedy Company, Chicago, Ill.; \$1 per bottle. California Catarrh Cure Company, Woonsocket, R. I.; 50 cents per bottle.	Admixture of corn starch. Admixture of corn starch. Admixture of wheat starch. Admixture of corn starch. Admixture of wheat starch. Admixture of corn starch. Admixture of corn starch. Condensed skimmed milk; fat in original milk, 2.5 per cent. Preserved with benzoic acid. Preserved with benzoic acid. Preserved with benzoic acid. Preserved with benzoic acid and salicylic acids. 50 per cent. of required strength. 2 per cent. of required strength. Contained 14 per cent. camphor; should contain 20 per cent. camphor. Contained cocaine. Contained 0.6 grain morphine per fluid ounce. Solution of common salt. Solution of common salt, flavored with cassia.
7273 7272			
7226 1035 P			
925 O 1053 P 7329			
7239	A No. 1 Catarrh Cure, . . . Dr. J. Emery-Coderre's Infants' Syrup. Klinck's Catarrh and Bronchial Remedy. California Catarrh Cure,		
6650 M			
6648 M			

INSPECTION OF DAIRIES.

During the month of February, 1908, 198 dairies were examined in the following places:—

PLACE.	Number examined.	Number found to present no Objectionable Features.	Per Cent.	Number to which Letters were sent.	Per Cent.
Abington,	32	27	84.38	5	15.62
Athol,	8	1	12.50	7	87.50
Brockton,	45	27	60.00	18	40.00
Burlington,	10	4	40.00	6	60.00
Second inspection,	17	7	41.18	10	58.82
Norwell,	20	14	70.00	6	30.00
Orange,	13	6	46.15	7	53.85
Palmer,	13	4	30.77	9	69.23
Phillipston,	1	1	100.00	—	—
Rockland,	17	6	35.29	11	64.71
Royalston,	5	2	40.00	3	60.00
Wilmington,	2	—	—	2	100.00
Second inspection,	1	—	—	1	100.00
Woburn,	7	3	42.86	4	57.14
Second inspection,	7	3	42.86	4	57.14

Total number of dairies examined,	198
Number found to be free from objectionable conditions,	105
Number to which letters were sent,	93
Total number of conditions to which attention was called,	369
Percentage of dairies which passed inspection,	53.03

The names of the owners of dairies found to be worthy of commendation follow:—

Abington.

Arnold, William B.	Dyer, Estate of David D.	Loud, William T.
Bates, Frank E.	Ford, Albee A.	Maloney, John H.
Blanchard, Charles N.	Fraser, Edward D.	Meserve, Justin.
Blanchard, George W.	Gaffney, Charles B.	Robbins, Miss Susie B.
Booth, George A.	Harris, Ernest M.	Smith, Henry W.
Brett, William C.	Howland, Edward C.	Turfant, P. P.
Cushing, Charles E.	Howland, Isaac C.	Warren, David.
Cutler, David H.	Hunt, Warren.	West, Chester A.
Daniels, Walter H.	Johnson, John.	Williams, George H.

Athol.

Vaughn, C. E

*Bridgewater.*¹

Ames, Fisher.
Beatty, William.
Burrill, Charles.
Conant, Estate of V.

Goodwin, F. E.
Johnson, George L.
Leach, Ernest.

Murray, James.
Rhoades, E. S.
Wilbar, J. Fred.

Brockton.

Alger, Everett.
Battles, N. O.
Bryant, J. E.
Butler, A. W.
Clark, Oscar.
Cross, W. B.
Emery Bros.
Farnsworth, J.
Field, D. W.

Field, F. F.
Foster, G. H.
Hewett, Justin.
Howard, Warren A.
Keith, E. E.
Leach, Marcus.
Manley, Milo.
Miller, M. J.
Newcombe, A. F.

Packard, J. Q.
Packard, M. A.
Packard, W. H.
Rankin Bros.
Reynolds, D. G.
Sawtelle, Edwin.
Southworth, M. C.
Sylvester, W. H.
Thompson, Miss Gertrude.

Burlington.

Bennett, E. A.
Butters, Charles.²
Graham, William.²
Hammond, Andrew.²

Hawkins, C. W.²
Hodsdon, O. C.
Lord, H. E.
Manning, C. M.²

McIntire, Charles.²
Reed, T. I.²
Richardson, Mrs. Sarah.

Norwell.

Burhoff, O. D.
Curtis, G. W. & J. H.
Evans, John A.
Heywood, John C.
Jacobs, Andrew F.

Jones, Frank W.
Loring, Benjamin.
Macomber, C. B.
Peckham, John L.
Power, Arthur L.

Sampson, Thomas E.
Sexton, Edwin M.
Thomas, Frank L.
Tolman, William C.

Orange.

Cummings, Benjamin.
Harrington, E.

Holden, F. G.
Stafford, A. E.

Thompson, Loring.
Wakefield, H. W.

Palmer.

Austin, P. J.
Dupree, L. T.

Emery, B. Frank.
Keith, Charles.

Phillipston.

Rounds, G. E.

Rockland.

Bell, W. H.
Poole, H. D.

Rudkin, W. J.
Sheldon, F. T.

Sheldon, J. B.
Wetherbee, C. A.

Royalston.

Brooks, Charles H.

Wheeler, Levi.

Woburn.

Ashbie Bros.
Damon, George H.²

Foster, George.
Hickey, Michael.

Pierce, J. L.²
Pushee, Frank.²

¹ These names were accidentally omitted from the January bulletin.

² Second inspection.

PROSECUTION IN ENGLAND FOR THE SALE OF TUCKER'S ASTHMA SPECIFIC.

Mr. Augustus Q. Tucker of Herne Hill was, according to the report in the "Daily Telegraph," summoned, on February 24, before Mr. Francis, for having unlawfully sold to George Waldoek certain poisons—to wit, cocaine and atropine—contained in a bottle bearing the words, "Nathan Tucker, M.D., Specific for Asthma, Hay Fever, and all Catarrhal Diseases of the Respiratory Organs," which bottle, when sold, was not distinctly labelled with the word "Poison" and with the name and address of the seller. The proceedings were taken under section 17 of the pharmacy act.

Mr. W. S. Glyn Jones supported the summons on behalf of the Pharmaceutical Society, on whose behalf a bottle had been bought from the defendants, contained in a case which bore nothing in the way of a label except the government patent medicine stamp and some embossed letters; the bottle contained no label, but embossed on the glass were the words, "Nathan Tucker, M.D., Specific for Asthma, Hay Fever, and all Catarrhal Diseases of the Respiratory Organs." Mr. Thomas Tickle, public analyst for Exeter, who had analysed the contents of the bottle, found it to contain 3.6 grains of cocaine and 0.91 grain of atropine. Evidence was also given by Mr. Peter Daniel, F.R.C.S., surgeon to the Metropolitan Hospital, who stated that cocaine was rarely given internally; the maximum dose was half a grain, and the fact that it was contained in 400 parts of some harmless ingredient would not materially minimize the danger. In cross-examination by Mr. F. E. Smith, K.C., who appeared for the defendant, Mr. Daniel stated that he did not know of a case where a drug supplied for use as an inhaler had been drunk. It would take 100 squeezes of the inhaler to take up one drop of the stuff. Mr. F. E. Smith submitted that if there had been any breach of the section it was of a technical character; it was Mr. Tucker's practice to send out these bottles with minute instructions that the fluid should only be used with an inhaler. Until quite recently he had been totally unaware of the ingredients.

The magistrate thought there had been a breach of the act, and ordered the defendant to pay a penalty of £5 and 5 guineas costs ("British Medical Journal," No. 2461, Feb. 29, 1908, page 539.)

THE COCAINE LAW OF THE STATE OF ILLINOIS.

The following sections of the pharmacy law pertain to the sale of cocaine and alpha or beta eucaine:—

SECTION 1. *Be it enacted by the People of the State of Illinois, represented in the General Assembly:* That it shall be unlawful for any person, not a registered pharmacist within the meaning of this act, to open or conduct any pharmacy, dispensary, drug store, apothecary shop or store, for the purpose of retailing, compounding or dispensing drugs, medicines or poisons, and any person violating the provisions of this section shall be liable to a penalty of not less than twenty nor more than one hundred dollars for every such violation: *provided, however,* that nothing in this act will prevent any person or persons owning a drug store or pharmacy, who shall employ and place in active and personal charge of the same, a registered pharmacist, and that nothing herein contained shall apply to nor in any manner interfere with the practice of any physician, or prevent him from supplying to his patients such articles as may seem to him proper, nor with the exclusive wholesale business of any wholesale druggist: *provided,* that nothing contained in this act shall apply to the sale of patent or proprietary preparations which do not contain cocaine, alpha or beta eucaine, or any salt or any compound or derivative of the foregoing substances, when sold in original and unbroken packages.

SECTION 14A. It shall be unlawful for any druggist or other person to retail, sell or give away any cocaine, alpha or beta eucaine, or any salt or any compound or derivative of any of the foregoing substances, or any preparation or compound containing any of the foregoing substances, or any of their salts or compounds or derivatives, except upon the written prescription of a duly registered physician, which prescription shall contain the name and address of the person for whom prescribed, and the date the same shall have been filled, and shall be permanently retained on file by the person, firm or corporation where the same shall have been filled, and it shall be filled but once, and of it no copy shall be taken by any person, and the original shall at all times be open to the inspection of the prescriber, to the state board of pharmacy and all officers of the law; except, however, that such cocaine, alpha or beta eucaine, or any salt, or any compound, or any derivative, of the foregoing substances, or any preparation or compound containing any of the foregoing substances or any of their salts or compounds or derivatives, may lawfully be sold at wholesale upon the written order of a licensed pharmacist or licensed druggist, duly registered practicing physician, licensed veterinarian or licensed dentist: *provided,* that the wholesale dealer shall affix or cause to be affixed to the bottle, box, vessel or package containing the article sold, and upon the outside wrapper of the package as originally put up, a

label distinctly displaying the name and quantity of cocaine, alpha or beta eucaine, or any salt or compound or derivative of any of the foregoing substances sold, and the word "poison," with the name and place of business of the seller, all printed in red ink; and *provided, also*, that the wholesale dealer shall, before delivering any of the articles, make or cause to be made in a book kept for the purpose, an entry of the sale thereof, stating the date of sale, the quantity, name and form in which sold, the name and address of the purchaser, and the name of the person by whom the entry is made; and the said book shall be always open for the inspection by the proper authorities of the law, and shall be preserved for at least five years after the date of the last entry made therein.

SECTION 14B. It shall be unlawful for any duly registered physician or other person to prescribe, sell or offer for sale, dispense or give away any cocaine, alpha or beta eucaine, or any salt or compound or derivative of the foregoing substances, or any of their salts or compounds or derivatives, or preparation or compound containing any of the foregoing substances, to any person addicted to the habitual use of cocaine, alpha or beta eucaine, or any salt or compound or derivative of the foregoing substances, in any form.

SECTION 14C. Any person violating any of the provisions of the foregoing sections 14A and 14B shall be guilty of a misdemeanor, and for the first offense shall be fined not more than one thousand (\$1,000) dollars, or imprisoned in the county jail not more than one year, or both, and for each succeeding offense fined not less than two hundred (\$200) dollars, nor more than one thousand (\$1,000) dollars, or imprisoned not less than three months nor more than twelve months in the county jail, or both; and if the person so offending shall have a license as a physician, dentist or pharmacist, such license shall be revoked; and the prosecution for the violation of the foregoing sections 14A and 14B shall be carried on in the same manner as for violations of the criminal code, and all fines collected in prosecutions shall inure to the benefit of the state board of pharmacy: *provided*, that suits for the recovery of the penalties prescribed in the other sections of this act shall be prosecuted as provided in section 15.

[Approved and in force January 17, 1908.]

SOME OBSERVATIONS ON RABIES.¹

By E. C. SCHROEDER, M.D.V., SUPERINTENDENT OF EXPERIMENT STATION.

THE REALITY OF THE DISEASE.

The disease commonly known by the names of rabies, hydrophobia, lyssa, canine madness, etc., is strictly one of the easily preventable diseases. Its communication from subject to subject depends upon

¹ Reprinted from the Twenty-third Annual Report of the Bureau of Animal Industry (1906). Circular 120, Bureau of Animal Industry, U.S. Department of Agriculture. Issued Jan. 29, 1908.

actual inoculation, and its persistence among dogs and its frequent transmission to other animals and to persons are conditions directly traceable to the absence of regulations of a kind commonly enforced for the suppression of other infectious diseases. The failure to adopt reasonable measures probably rests largely on a misconception of the frequency with which rabies occurs, and to a great extent on a false sentiment against subjecting dogs to proper restraint.

While there is no desire to enter into the still active controversy regarding the existence or nonexistence of the infectious disease that has been repeatedly described under the name of rabies or one of its synonyms, this side of the subject cannot be ignored.

It is something of a mystery why a greater diversity of opinions should be held about rabies than about other infectious diseases. Its occurrence, nature, symptoms, mode of communication, etc., are facts of observation and investigation that have an evidential value fully as strong as the best reasons that can be given for our belief in the existence of diseases like smallpox, scarlet fever, measles, etc.

Many lovers of the dog, who regard him as man's best friend among animals, seem to believe that it is an unjust charge against his admirable character to acknowledge that he may suffer with rabies. Their view is unreasonable, as the susceptibility of an animal to disease has no connection with its moral nature or character, and we cannot obliterate or modify facts by refusing to accept them; but, if a dangerous condition exists, we may greatly increase the amount of suffering it causes by denying and ignoring it and permitting it to operate without restraint. To admit the truth about rabies may mean that we accept a fact the existence of which is antipodal to our wishes and contrary to our sense of justice; but it is no more a criticism against the commendable attributes of the dog, through which he holds our affections, than it is an adverse criticism of man to assert that he may become affected with any one or more of a number of diseases through which he, as an individual quite independent of his moral personality, becomes a menace to the welfare of his immediate associates and indirectly to the entire community. The dog has virtues enough to hold his place in our esteem in spite of the fact that he may be the victim of rabies and do great harm while he is affected with this horrible disease, which deprives its subjects of all moral responsibility before the desperate agony it causes ends in death.

THE EXISTENCE OF RABIES ESTABLISHED BY IMPARTIAL INVESTIGATION.

A deliberate denial of the existence of rabies means one of two things: either a lack of information, or an impeachment of the honesty of innumerable impartial observers and investigators. Those whose denial is based on lack of information, if they are at all open to conviction, will change their minds after examining what has been written on the subject by men who are above the reproach of an attempt to malign the canine species. To those who have never seen rabies, and for that reason cannot be convinced of its existence, it can only be said that not to be acquainted with a thing through personal experience, not to have seen or encountered it, not to have knowledge of it through our senses, means nothing but inexperience relative to the thing in question. The writer has never seen a case of smallpox or Asiatic cholera, and yet they are, unfortunately, common diseases. He has not seen the Asiatic continent, but that does not reduce its great area by the smallest fraction of an inch or its enormous population by one person.

A general impeachment of the honesty of the many writers who have recorded their observations of rabies approaches a libel on human nature such as it is sincerely hoped no facts will ever give the semblance of truth. The moral side of man has its defects, but it is not corrupted by a widespread degradation that can lead thousands of otherwise honorable, truthful men, among whom must be included many famous, clear-visioned benefactors of mankind, to deliberately falsify truth for no better purpose than a supposed pleasure that is to be derived from falsification, or, at best, an attempt to malign a species of animals. The animosity that some persons may feel toward the canine tribe may be sufficient to account for a too ready acceptance of what they believe is derogatory to it; but among the writers on rabies who have information at first hand are many lovers of dogs, who are willing and ready to defend the dog with sturdy energy against all enemies, and who believe that the worst enemy against which he must be defended is the desperate agony of the fatal, infectious disease now under consideration.

FALLACY OF THE IMAGINATION THEORY.

There are persons who admit the existence of an affection that frequently follows injuries inflicted by the teeth of a dog, but they say that it has nothing to do with an infectious agent. The disease is alleged to be caused by an overwrought imagination, that dwells with extreme, morbid intensity on a greatly feared but wholly fictitious danger. To those who hold this belief it must be apparent, even if

it is admitted that an adult person may be found occasionally with a sufficiently active imagination to give it the least validity, that children and the lower animals never possess the necessary power of abstract concentration to induce through its exercise or the exercise of any faculty of the mind an acute, rapidly fatal, nervous affection. Hence this belief, which suggests an abstract process that leads to a concrete, unintentional suicide or self-destruction, does not explain the occurrence of rabies among children and animals, and especially not among the latter.

If there is one place where a sharp line can be drawn between man and the whole known world of organisms subordinate to him, it is in connection with this matter of abstract thought. Man alone has the intellectual endowment for abstract thought. Animals, and children during the first years of their lives, if they think at all, confine their thoughts to the contemplation of concrete objects and their concrete attributes. Imaginary dangers, fictitious evils and abstract apprehensions will not reduce the health or endanger the life of a horse, a cow, a sheep, a dog, or of a child until it has learned to express its thoughts in language.

One of the tests of the validity of a theory is to determine its compatibility with all the known facts for which it is devised to offer an explanation. The imagination or apprehension theory, as it may be called, to supply an explanation for the peculiar, fatal, nervous disease that is meant when the name rabies is used, is insufficient to account for the disease in anything but some human beings who have passed the years of early childhood. This alone is a fatal objection to it, to say nothing of the fact that it is altogether too complex to serve as a reasonable explanation for any manifestation of nature. Nature, wherever we know her, is simple and direct. The multiplication of a living virus in the body of an animal, the communication of this virus directly or indirectly by the affected animal to another animal, the multiplication of the virus in and the consequent affection of the second animal, are processes that have been demonstrated to occur with most infectious diseases in man and animals, and this is the simplest conceivable explanation of what infection is and how contagion is effected.

Here, of course, the question will be asked, "When did the first case of rabies originate, if it is the result of a living virus that grows in the body of a person or animal, and every case supposes the previous existence of an earlier case?" The answer to this question is a mystery that is buried in the primary causes of things. The same question may be asked with equal right about every living organism in the universe. Each cornstalk requires the existence of a previous cornstalk

that produced fertile seed, and each weed an earlier weed of a similar kind; and this is true of every animal and plant in the whole category of living things, from the highest mammal to the lowest microzoon, from the largest tree to the most minute bacterium. To deny the existence of rabies because we cannot trace the virus to its primary origin is to use an argument that can be applied with equal justice to show the nonexistence of both the dog and his master and everything else living and dead. Primary, fundamental or final causes are beyond human comprehension, and those persons who require them as a basis for their beliefs, if they are consistent, must necessarily deny the existence of everything.

THE FREQUENCY AND DISTRIBUTION OF RABIES.

Relative to the frequency with which rabies occurs and the broad territory over which it is disseminated, many carefully compiled statistics from medical journals could be quoted, but it is not necessary for our purpose to do so, as the daily newspapers supply abundant material. The Chicago "Chronicle" of September 22, 1906, states that rabies prevailed during the year in the following States: Massachusetts, Ohio, the Dakotas, New York, Michigan, Connecticut, Indiana, New Jersey, Kentucky, Pennsylvania, Delaware, Illinois, and Rhode Island. To this may be added cases that came to the writer's personal notice from Maryland, Virginia, the District of Columbia, and North Carolina.

During three weeks of the month of January, 1907,—a season of the year when rabies is supposed by many to be least prevalent,—there appeared in the daily papers of Washington, D. C., no less than twelve items dealing with cases of rabies or hydrophobia in the eastern section of the United States. According to these reports, at least nine persons had died recently as a result of the bites of rabid animals, and scores of people had been bitten.

At Norfolk, Va., a huge hound bit nine persons while it was suffering from rabies. Four of the persons—two policemen and two little children about four years old—were terribly bitten. Six of the victims were children ranging in age from four to eleven years. The body of the dog was examined in the Pathological Laboratory of this Bureau, and the animal was pronounced to have been affected with genuine rabies.

One stops to think with horror of the apprehensive agony of the parents of these children, the suffering to which parents and children are subjected while treatment is being applied to prevent the development of the terrible disease, to say nothing of the expense of treatment, which for most people is an extreme hardship. Fortunately in this

case the cost of the treatment for the persons who were bitten — \$1,200 — was raised by public subscription. The very idea of an injury to the tender, soft skin of a child cannot be entertained by a normal mind without causing a shudder. It is to children first of all that our love and protection should be given, both against physical suffering and the greater agony that comes with the terror they endure when they are attacked by something against which they realize their impotence to defend themselves.

Of two deaths from rabies recently reported, one was that of a coachman who was infected by the caresses on his face of his pet dog that a few days later developed rabies, and the other of a child that showed no marks of having been bitten. Attention was called by the press to the danger of infection through any form of wound or abraded skin which becomes contaminated with rabic virus. The possibility of such infection through a wound is borne out by the fact that the inoculation of the virus into any portion of the body of experiment animals produces the disease. Injection of the fragments of the brain from a dog that has died of rabies under the skin or into the muscle of a rabbit produces typical, fatal rabies, often as rapidly as an injection into the brain. There is a marked relationship, however, between the rapidity with which the disease develops and the proximity of the point of inoculation to the brain. Wounds inflicted by rabid dogs about the head and neck are more rapidly fatal than those on the extremities, the legs or arms, or the lower portions of the body.

If it lies in the character of the dog to run amuck quite frequently, or only occasionally, with no cause like rabies to explain his frenzy, we must regard him as having profited too little from his long domestication and association with man to enjoy special liberties and a freedom from restraint that no sane person claims for or wishes to bestow on horses, sheep, swine or other species of animals. This running amuck, as it implies an inherent and incurable defect of character of an exceedingly objectionable kind, would constitute a more serious charge against the moral nature of the dog, if it were true, than rabies. Rabies is a disease that can be stamped out entirely by adopting and enforcing proper measures against it. An inherent characteristic is a totally different matter, which would be as difficult to eliminate or eradicate as the tendency of dogs to bark.

TWO CASES IN HORSES AT THE EXPERIMENT STATION.

The case of a horse which died of rabies at the Bureau Experiment Station in the fall of 1906 presents a striking illustration of the terrible nature of the disease. On Sept. 14, 1906, a small bay mare, a tractable,

intelligent animal, in good physical condition, somewhat advanced in age, was brought to the station by her owner to be kept in confinement and under observation, because she had been bitten by a dog. The Pathological Division of the Bureau examined the dog, and determined that it was affected with rabies. The mare was bitten on the right side of the face, a few inches above the angle of the lips; the injury was clearly visible as a group of small scars. Shortly after the wound was received it was treated by a veterinary surgeon.

At the station the mare was placed in a large, well lighted and ventilated box stall, in which she was allowed to move about at will, untied. She remained well, as far as could be determined from her appearance and conduct, until September 27, when she failed to eat her evening meal, neighed a great deal, and seemed to be nervous and restless. On the following day, September 28, beginning at 8 A.M., she showed what may be regarded as the unmistakable symptoms of violent rabies. The symptoms observed and recorded are practically identical with those shown by a horse that became affected with rabies at the station in the year 1900, as the result of a bite inflicted by a rabid dog.

The preliminary symptoms were restlessness, nervousness and loss of appetite. The mare was easily startled by sounds to which she was accustomed and did not ordinarily notice. These symptoms may be important in connection with horses that are known or suspected to have been bitten by rabid dogs, and are retained in service or not properly confined to prevent them from harming persons and animals.

Beginning from twelve to twenty-four hours after the above symptoms, at 8 A.M. the mare was restless, her lips quivered, and there was some froth about her mouth. At 9 A.M. she was more restless, her face had an anxious expression, the froth about her mouth had increased, and she pawed the earth floor of the stall incessantly. At 10 A.M. practically no change was observed. At 11 A.M., in addition to the froth at her mouth, a thick, viscid saliva fell in drops from her lips; her mouth was in constant motion, her tongue was protruded and drawn back repeatedly with a rapid movement, first to one side, then straight out, then to the other side, somewhat more frequently to the side on which her face had been bitten; her head was swung violently up and down and from side to side; the muscles of her back were tense, and those of her mouth, lips, chest and shoulders twitched frequently. Although she was not observed to have made an attempt to bite during the two weeks she was at the station previous to the development of rabies, and was said by her owner always to have been gentle and quiet, she now plunged viciously at every person who approached the stall, with her ears depressed and lips drawn back so far as to expose the full length of her front teeth and gums. She snapped

frequently at the sides of the stall, and seemingly at imaginary objects; her teeth came together with a sharp sound like the click of a steel trap. At 11.10 A.M. she passed urine. When her tail was accidentally touched she kicked viciously and repeatedly. These symptoms continued without noticeable change until 1 P.M., when she began to snap and paw more frequently, and to bite her shoulders and legs. Her saliva was now thinner, less viscid, and flowed more freely, and was occasionally, when she moved her head violently, sprayed in a shower of drops to a distance of several feet. At 2 P.M. she struck with her front feet at the sides of the stall, threw herself, and regained her feet in a few minutes. At 2.30 P.M. she made frequent unsuccessful attempts to pass feces. At 3 P.M. lay down, tried to roll, got up, and passed a small ball of feces coated with thick, creamy mucus. At 3.15 P.M. passed urine of a strong, pungent odor; made frequent attempts to lie down, but remained on her feet. At 4 P.M. lay down and immediately began to bite her forelegs viciously; five minutes later was up again, and some blood flowed from her mouth, due to self-inflicted injuries of her lips and tongue. Every muscle of her body twitched and quivered, and her respiration was greatly accelerated. At 4.15 P.M. seized her foreleg so violently with her teeth that she threw herself; viciously bit her now bleeding legs and shoulders over and over again; attempted to roll, and thrashed her head against the floor of the stall; her eyes had a set, glassy appearance. At 4.30 P.M. she was still down, made no attempt to get up, but passed through all the motions with her legs and body, alternately, of very rapid trotting and violent running. She became comatose at 4.40 and died at 5.13 P.M.

The autopsy record is as follows: The meninges of the brain are greatly congested. The right shoulder shows numerous small tears and cuts in the skin; under these the tissues are contused and infiltrated with blood and serum. The right leg shows numerous abrasions. On the inner surface of the right forearm a hole an inch in diameter has been torn through the skin; under this the periosteum is partly stripped from the bone, and the latter shows tooth marks and scratches. The tongue, lips and face show numerous cuts and bruises. The injuries were self-inflicted during paroxysms of agony and fury. The wound in the face, made by the rabid dog, was completely healed, but there was some congestion in the tissues where it was located. No other lesions of disease were found.

In one respect the symptoms in the mare differed from those of the horse referred to as having died in the year 1900. The latter perspired profusely, and its entire body was as wet as though it had been dipped in water; while the body of the mare remained dry. In both cases the animals were harrowing objects. The combined and cumulative suffering of many dogs through continuous proper muzzling would be extremely mild in comparison.

The description is a weak attempt to represent the agony visibly suffered during eight long hours on the day the mare died. The conditions were unfortunately such that the poor animal could not be killed at once to end her agony, and to approach a horse while it is suffering with the violent paroxysms of rabies to apply alleviative treatment would be suicidal for the strongest man. Her violence made it impossible to obtain records of her temperature and pulse, or to make other observations that require tactual examination. A pail of water in the manger of the stall was emptied several times. This could be and was refilled by pouring into it from the top of the stall partition. Whether the water was actually swallowed or only splashed out is uncertain, but she plunged her muzzle into it again and again, as though she was very thirsty and wanted to drink. There was no fear of the water. Her throat in the region of the larynx gave the impression of unusual prominence, but here again, because she could not be approached without great danger, no thorough examination could be made; but it is probable that the prominence was due to an extreme spasmodic contraction of the muscles of the larynx and pharynx.

The fury with which the poor beast plunged, bit, kicked, pawed and thrashed about, and the terrible picture of suffering and violence she presented, may be judged to some extent from the fact that men who are experienced in the care and management of large animals, and whose courage for handling unruly horses and cattle has been proved repeatedly in practice, actually approached her dead body with reluctance and uneasiness, and confessed that they would not have entered the stall before the mare died, under any consideration, however profitable.

The mare was bitten on September 3; was brought to the experiment station eleven days later, on September 14; showed the first symptoms of rabies on September 27, or thirteen days after her arrival at the station and twenty-four days after she was bitten; and died one day after the first symptoms were observed. The time that elapsed between the bite of the dog and the death of the horse that contracted rabies in the year 1900 was somewhat longer. The horse was bitten on April 27, and died June 5, or after an interval of thirty-nine days.

For those who doubt the existence of rabies, or believe that it is a disease induced by the fear of an impending evil, the cases of these two horses offer food for reflection.

The number of horses kept at the experiment station at any one time during the last ten years varies from ten to forty, and averages about twenty. The total number of different horses that have been at the station during the last ten years, for periods of time varying from three months to ten years, is not less than one hundred. Among these

only two are positively known to have been bitten by dogs that showed symptoms of rabies, and only these two horses contracted rabies. If there is no relation between the bites of the dogs and the affection of the horses, we have here a very remarkable coincidence. Lyssaphobia, or the dread of lyssa or rabies, as has already been pointed out, cannot serve as an explanation with horses. There is and was nothing in the stalls or the stables occupied by the horses to account for their affection. Other horses occupied the same stables and the same stalls both before and after the two that died of rabies. The others had not been bitten by rabid dogs, and they remained perfectly well and nothing resembling rabies happened to them. Horses kept under precisely the same conditions as those that died of rabies for much longer periods of time also remained well. There is only one rational explanation, and it is this, — that rabies is an infectious disease that is communicated from animal to animal or from animal to person by a bite or some other injury into which the virus of rabies is introduced.

INSTANCES OF DANGER FROM RABID DOGS.

The dog that bit the horse that died in the year 1900 afforded an example of the extent to which persons and animals over a large territory may be exposed to danger through a single rabid dog. He escaped from the yard of his owner in Washington, D. C., early in the forenoon, and was killed by a blacksmith, whose dogs he viciously attacked, about seven miles from the city, early in the afternoon. His weight was about fifty pounds. During the few hours he was at large he passed along a mile of city streets and through three suburban settlements, one of which is located fully a mile from the direct road between his point of escape and the place where he was killed. He is known to have attacked four persons, two horses, several cattle and seven or eight dogs. The persons and cattle fortunately escaped injury; the one horse contracted rabies, and the other was accidentally killed by an electric car shortly after it was bitten; and the dogs were killed as a precautionary measure. If the persons attacked had been children, and not resolute adults, it is questionable whether they would have escaped. The dog passed directly by one public school, and attacked two persons, a man and his sister, within a hundred yards of a second public school. At the time of his passage the children were within doors; had they been on their way to or from school, or out at recess, what might have happened is not pleasant to contemplate. He probably would have done more damage than the dog reported from Norfolk, Va., as having injured six children and three adults. Had the blacksmith who killed the dog failed to do so, it is difficult to say how much

farther he would have gone, or how much more damage he would have done.

Among my notes on rabies is the record of a large foxhound, a very valuable animal, with a championship record for speed, that reads as follows: April 18, was not well in the morning, extremely restless and nervous, did not seem able to find a comfortable position; feverish, thirsty, got into a small stream of water several times, as if to cool himself. At 4 P.M. the same day the dog disappeared, and returned home at 6 A.M. April 20. After his return he was still restless, and showed symptoms of paralysis about his lower jaw; his vision seemed to be affected, and he was unable to swallow milk or water, although he tried to do so; succeeded in swallowing some solid food. The inability to swallow liquids, while the ability to swallow solids remained, is a very characteristic symptom of rabies.

The dog died on April 23. On post-mortem examination the body showed numerous comparatively fresh scars, of the kind received by dogs when they fight with each other. The organs, as is usually the case with rabies, showed no sufficient lesions to account for the sickness and death. Four rabbits that were inoculated with a minute amount of an emulsion made by crushing a piece of the spinal marrow in sterile water died, one on May 8, two on May 10 and one on May 11, affected with typical paralytic rabies.

This dog, a large, speedy hound, was at liberty during thirty-six hours while he was affected with the active or furious form of rabies. The scars on his body showed that he had met and fought other dogs. All this occurred in a thinly settled county, but it shows how long a rabid dog may remain at large and roam before the paralysis that commonly precedes death from rabies makes him harmless. During the year following the death of the rabid foxhound quite a number of dogs contracted rabies in the territory over which he roamed.

It is truly marvelous that the amount of injury suffered by children through the vicious fury of rabid dogs is not greater; probably their safety is due to the instinctive fear they have of strange dogs, and their consequent tendency to seek a place of safety the moment a dog of unfriendly appearance attempts to approach them.

WHY DOGS ARE THE PRINCIPAL SOURCE OF THE CONTAGION.

The intimate association in our minds of dogs and rabies does not necessarily imply a greater susceptibility of dogs than other animals to the disease. The dog is not the only animal that can communicate rabies by a bite. The bite of a rabid horse, cat or person is just as dangerous as that of a rabid dog; but it is only dogs and cats that

are given an amount of liberty that makes them specially dangerous. No other animals, excepting possibly poultry and pigeons, are allowed to be at large in the same way unattended and unrestrained.

The dog is more dangerous than the cat, because he is a social and the cat a solitary animal; that is, the canine family in its native state lives in packs, and each individual craves association with other individuals of its kind; while the members of the feline family in their native state are solitary hunters, and care nothing about society beyond the association of the sexes for purposes of procreation. The movements of cats are confined to hunting food and the search of the male for the female. The dog must have companions, and is restless and unhappy without them. Social life of animals means many battles for the leadership of the pack or herd. The dog often fights instinctively for the glory of leadership, and is naturally more pugnacious than the cat, which fights only in self-defense, or to obtain some material benefit, either food or a mate or a preferred lair or shelter. Social animals as a rule range over a more extensive territory than solitary animals; it is absolutely necessary that they should do so in order to obtain a sufficient amount of food, as more food is required to feed a pack or herd than an individual or at most a pair. Every one who has observed both dogs and cats knows of the greater tendency of the former to roam; it runs in their blood; it has been transmitted to them by their early ancestors. When dogs meet, they greet each other; when cats meet, unless there is some material reason for a contrary action, they pass each other. Society means more opportunities for both concord and discord than solitude presents.

As rabies may be transmitted by a bite as early as six days before the symptoms of the disease manifest themselves, it is not difficult to see why the hereditary social desire, which brings with it frequent opportunities to fight, and the pugnacity required to gratify the instinct for leadership, should give the dog a position very different from that of the cat relative to rabies. If the cat was also a social animal, its superior agility, its ability to climb over obstructions and walk along narrow, elevated passages and ledges that are inaccessible to dogs, would long since have made it the more serious menace.

RAPID DIAGNOSIS BY MEANS OF SO-CALLED NEGRI BODIES.

Until the year 1903, when the investigator Negri discovered small bodies, which were named after him, in the protoplasm of the nerve cells of rabid animals, which occurred neither in health nor in the presence of other diseases, the post-mortem examination of persons and animals that succumbed to rabies gave only vague results. As with

many other diseases of the nervous system, nothing truly characteristic could be found. It was necessary to base the diagnosis on the history, the symptoms and the general conditions presented by each individual case, or to wait for the development of an inoculation test, in which a small animal, usually a rabbit, was used. Such inoculation tests sometimes required the passage of only ten or twelve days, usually as long as three weeks, and not rarely longer than a month.

Since the bodies of Negri were discovered it has become possible to make an absolute diagnosis of rabies within a few hours. These bodies have been found in ninety-six to ninety-eight per cent. of all cases of rabies that have been examined, and are so permanent that their presence can be demonstrated some time after decomposition of the tissues in which they are located has begun. Whether the bodies are the micro-parasites of rabies or a product of the disease has not been determined, but we have in them a positive factor that distinguishes rabies from all other known diseases, as well as from all normal conditions. The practical importance of this discovery, apart from its definite pathological significance, is well illustrated by the following occurrence:—

A number of years ago a local physician informed me by telephone that he had under treatment an elderly woman because she had been severely bitten by her pet dog, which had suddenly and without apparent cause become so surly, morose and irritable that it was necessary to kill it. I told the physician to send the dog's body to me, so that I could obtain material from it to make a test inoculation for rabies. The body was sent, and I took out the brain and used small portions of it to inoculate two rabbits. The rabbits became affected with typical rabies, and died on the seventeenth day after inoculation. When I called up the physician to inform him that the diagnosis of rabies was complete, and to advise him to send his patient to a Pasteur institute for treatment as soon as possible, he told me in a very irascible manner that he did not need my information, and that his patient was beyond Pasteur and all other treatment; that she had died of rabies four days earlier than my test rabbits, and that she had suffered agonies such as he hoped never to witness again.

The woman died on the thirteenth or fourteenth day after she was bitten; the bites were inflicted on her face, neck and arms. Had the bodies of Negri been known then as they are known now, it could have been determined on the same day the dog was killed that he was affected with rabies, and his mistress would have resorted to Pasteur treatment without loss of time, and would thus have escaped a terrible death.

A case like the foregoing is not unique or singular; the literature on rabies contains many that are parallel to it.

MEASURES FOR THE SUPPRESSION OF RABIES.

We now come to the important question, What action can be taken for the suppression of rabies?

Federal regulations have been advocated by many persons, but are not feasible. Rabies can be controlled only by close police surveillance, which, if the United States attempted to practice it, would engender bitter and unending controversies about State rights, and would cost an enormous sum of money. The disease rarely assumes the form of an epidemic, and when it does so, the most the federal government can do is to quarantine the State in which this occurs, for the protection of the other States. Hence the adoption of regulations for the control of rabies must remain a matter for local action, and be governed by locally prevailing conditions.

In all regulations the dog must receive first consideration, because he is, through a combination of his frequently pugnacious disposition, his social instinct, his tendency to range over a considerable area, and the great freedom given him to move about everywhere with little or no restraint, the main factor in the persistence and dissemination of rabies.

I have already made the statement that no one will claim for other domestic animals the same freedom from restraint that is commonly granted to the dog. If dogs were treated like horses, for example, both rabies and vagrant dogs would shortly cease to exist. The very freedom accorded to dogs seems to cheapen them in our estimation. In many instances the best reasons that owners can give for allowing their dogs to run at large unattended is that they have no value, and it is usually the least valuable dogs that do the most running.

MUZZLING.

When it is suggested that all dogs should wear muzzles, a great cry is raised against the cruelty of the practice; and yet no one claims that it is cruel to place a bit in a horse's mouth, harness on his body, to fasten him to a wagon or plow or something else to pull, and to allow him to go only where the driver directs, without taking into consideration the horse's inclination for direction or to go at all or to stop. It is no more difficult to accustom a dog to a muzzle than to break a horse to harness, and there is nothing cruel about either practice. Under domestication the horse is protected from numerous hardships to which he would be exposed in a wild state, and is consequently more contented, and has more reasons for being so, with the relatively few exceptions of abuse, to which the humane societies attend. The harness

he wears is the price he pays for an assured shelter and a sufficient and continuous supply of nutritious food.

A dog will of course resent the presence of a muzzle until he becomes accustomed to it, precisely as the horse resents the presence of harness on his body and a bit in his mouth until he has learned to wear them as quietly as most horses do the world over. In some portions of Europe dogs are required to wear muzzles when they are not otherwise restrained from biting, and they do so as naturally and quietly as horses wear harness.

SUGGESTED LAWS.

If laws covering three points could be made and properly enforced, there is no doubt that rabies would soon have no existence but in the history of the past. The features to be embodied in such laws should be as follows:—

1. The proper licensing of dogs, and the extermination of those that are not licensed.
2. The proper muzzling of all dogs when they are in public places or on public highways.
3. To hold dog owners responsible for the damage traceable to their dogs.

Every dog should be required to wear a collar inscribed with the license number and the name and address of the owner. The cost of the license, collar and muzzle would be a price by no means great to pay for the privilege of keeping a dog.

No one should oppose the capture and the speedy and painless destruction of homeless and ownerless dogs. These are the members of the canine family that do the most harm. They have wits that are sharpened by the struggle for existence to which they are constantly exposed. The outcast dog, the so-called "yellow cur," roams far and wide; he acts cowardly in the presence of danger, but it is only a surface cowardice, based on bitter experience that has taught him to reserve his energies; when he is cornered, or when there is anything to gain, he fights, and fights hard. I have no animosity toward this mongrel waif; he merits respect, and if he were not a menace to the public safety, I should regret to see him exterminated.

The ownership of animals imposes obligations, both relative to the animals and to the communities in which they are owned. This statement is accorded the value of a truism when it is applied to an underfed or overworked or otherwise abused horse, or to a dangerous bull that is allowed to frequent a public common or highway unattended. But when we apply it to the dog it is quite another matter, and yet a rabid dog is more dangerous than a bull with a vicious disposition.

IMPORTANCE OF CAREFUL OBSERVATION OF DOGS.

But without the enactment of additional laws much can be done to reduce the danger from rabies. Every owner of a dog should examine it daily with sufficient care to detect marked changes in its physical condition and character that may be the symptoms of approaching disease; and when such changes are observed, the dog should be so confined that, should it become affected with rabies, it will not be able to communicate the disease to persons and animals. This is very little to ask of dog owners. If they care for their dogs as they should, no special effort will be required to watch them carefully; and to properly isolate a dog when he is sick, or not quite normal, is a common-sense proceeding that should be universally practiced not only with dogs, but with all animals and persons that are sick, until it can be determined that they are not affected with a disease of the infectious or communicable kind. All diseases of dogs are not rabies, and rabies is not the only infectious disease of dogs. Proper confinement and isolation the moment dogs show a variation from their normal condition will reward itself in time, in addition to the effect it will have on the suppression of rabies, through a considerable reduction in the frequency with which diseases like mange, canine distemper, etc., occur.

Before a dog becomes affected with the active, furious form of rabies, he commonly shows some preliminary symptoms. It is to be regretted that they are vague, indefinite and uncertain. The dog may be morose and irritable, or appear more affectionate than usual; he may be dull and stupid, or unusually nervous and excitable. Once the disease is fully developed, there is nothing uncertain. The blind, desperate fury, followed by paralysis and death, are absolute diagnostic symptoms, but cannot be observed by the owner unless the dog has been confined in time to keep him from running perhaps miles away from home.

Another precaution for dog owners to take is a careful examination of their dogs for injuries inflicted by other dogs, when it is known that a dog in the neighborhood has become affected with rabies, or that a rabid dog has passed through the neighborhood. When injuries are found, the owner should either watch his dog with redoubled vigilance, muzzle him and place him in confinement, or have him destroyed in a painless manner. Since dogs are at all times apt to bite each other, frequently in play without viciousness, and rabies may be communicated by the bite of a rabid dog certainly as early as six days, and according to some authorities eight days, before the symptoms are apparent, this precaution for the safety of animals and persons is really an imperative obligation to the community imposed by the ownership of dogs.

DUTIES AND RESPONSIBILITIES OF DOG OWNERS.

Dog owners should bear in mind that, in urban if not in rural communities, they constitute a minority, and that even among themselves many, probably the majority, realize the great need of measures for the suppression of rabies. Unless precautions against the persistence and spread of rabies, such as have been suggested, are taken by dog owners, the enactment and enforcement of laws of the nature hereinbefore specified will become imperative. The reason why laws of this nature have not been made is due to the active fight against them by a small, greatly interested minority, that opposes a tardy, disinterested majority. The minority fights hard for a privilege it has long enjoyed and abused,—that of allowing dogs to be at large without restraint at all times; and the majority has never half realized that this privilege is costing a high price in the destruction of property and in horrible agony and numerous deaths. Many of our large cities are supporting institutes for the treatment of persons who have been bitten by rabid or mad dogs; other cities are contemplating the establishment of such institutes; and the need for such institutes is wholly the outgrowth of the difference between the liberty and privileges given dogs and those allowed to other domestic animals.

The real question is not one of affection for or animosity to the canine species. The dog, in his place, under proper observation and properly restricted, is an admirable, intelligent, companionable animal. This article has been written from the viewpoint of the dog owner. The writer has owned one or more dogs as long as he can remember, and now owns six of them. They are sheltered, well nourished and contented, and are kept under conditions which insure that they shall not be an expense or a danger to the neighbors or to the community.

The dog owner who knows what rabies is from experience, if he has the proper consideration for his own welfare and that of his dogs, will be among the first to demand a movement for its suppression, even if this should place restrictions on the freedom of his dogs. His interest is greatest because he has the most at stake, and is himself most seriously and frequently exposed to the infection.

IS STERILIZED MILK A SAFE FOOD FOR INFANTS?¹

By E. MATHER SILL, M.D., NEW YORK.

This question I shall endeavor to answer in the following paper largely from my own experience, but substantiated and emphasized by the experience of others.

Some six years ago my attention was drawn to this subject from the fact that such a high percentage of infants fed on sterilized or pasteurized milk were found to be diseased or abnormal. Investigations have been closely followed up from that time to the present.

We are all agreed that upon the proper feeding of the infants of to-day depends the health of the succeeding generation and the general physical condition of the nation, for the infant of yesterday is the child of to-day and the man of to-morrow; and it lies in a large measure with the profession whether the infants of to-day and of the coming generations shall be a strong, sturdy, well-developed lot, prepared to resist disease, and physically equipped for the hardships they will encounter in the world, or an ill-nourished, poorly developed, undersized, inferior race, with little power to resist disease. In short, it is our supreme duty to find out what is for their good, and our supreme business not to be defeated in realizing that good.

Before going farther it would be well to define just what is meant by sterilized, pasteurized and raw milk, as I shall make use of these terms constantly.

To become sterilized, milk is boiled or heated to a temperature of 212° F., which temperature is maintained half an hour.

To become pasteurized, milk is raised and kept at a temperature of 160° F. to 170° F. for twenty to thirty minutes.

By raw milk we mean milk just as it has come from the cow, unheated.

Observations show that the heating of milk only moderately alters the constitution of its ingredients by disintegrating the organic union of the proteids and mineral salts. In this disintegrated state the nutritious quality and digestibility of the milk are impaired; hence starvation and atrophy of the tissues, and consequent diminution of cell growth.

If pasteurization made milk a perfectly safe food, it would be universally adopted; but, besides changing the chemical ingredients and composition of the milk, it destroys the harmless bacteria, many of which kill off the harmful kind, and thus the milk is a better culture medium for the virulent or disease-breeding varieties.

¹ Reprinted from the "New York Medical Journal," Feb. 8, 1908.

We are consuming bacteria in other foods constantly. They are necessary to make our cheese, in the form of yeast to raise our bread. They are found in large quantities in the cream which makes our butter, and in numerous other substances, and in fact are necessary for the production of certain of our daily foods. So that the idea of having everything sterile before eating is wrong, impossible and unhealthy.

Dr. Freudenreich tells us that fresh, raw milk has germicidal properties, and, according to his experiments, the bacillus of cholera dies in an hour when put into fresh cows' milk, the bacillus of typhoid fever in twenty-four hours, while other germs die at the end of varying periods; and milk that has been exposed to a temperature of 131° F. loses these germicidal properties.

Russell and also Freeman, after various experiments, conclude that a temperature of 140° F. (60° C.) for twenty to thirty minutes is sufficient to destroy the bacillus of tuberculosis, diphtheria and typhoid fever.

Recent observations by Spolverini and Hippus have proved the presence of various ferments, both in mother's milk and cow's milk, and the weakening of these ferments by a moderate amount of heat (145° F.) and their destruction by a slightly higher degree. According to Spolverini, in sterilizing milk the following changes take place in the composition of the milk:—

1. Expulsion of carbonic acid gas of milk, which stimulates the secretion of the gastric juice.
2. Diminution of the amount of lime and free phosphoric acid, increase of insoluble calcium phosphate, which is not absorbed, and precipitation of the antiscorbutic citric acid.
3. A large part of the lecithin in the nucleon is destroyed and precipitated as unabsorbable, inorganic compounds.
4. The casein is changed and rendered unabsorbable, and the soluble albumin is coagulated.
5. The fat globules unite into larger masses, that are less easily absorbable.
6. The ferments are destroyed, and thus are lost antitoxic and immunizing substances, and microbicidal compounds of great value to the child. These disadvantages result in the child being pale, with soft flesh, having a predisposition to intercurrent diseases and a lack of resistance to ailments, with rickets, showing disturbances of nutrition.

It has been stated that the germs of typhoid fever, diphtheria, scarlet fever and consumption are frequently carried by milk. No doubt this is true in a few instances; but we all are familiar with the latest method of treating consumptives by giving several quarts of raw milk

each day, and for years patients with the other diseases mentioned above have been fed on raw milk.

If we subject fresh milk that contains germs to heat, the milk still contains the dead germs and their toxins. Heat does not purify milk by killing the germs, and the toxins contained will cause disease.

What, then, is meant by a "*safe*" food? A safe food for an infant is one in which all the elements of the *milk* have been unchanged as to their organic union. Heating disorganizes these elements, devitalizing the milk and changing it from a *live*, fresh food to a *dead*, preserved food.

It being my privilege to have yearly under my care some five thousand infants, I have had exceptional opportunities for studying the various methods of feeding, especially as we have our own diet kitchen for the modification, sterilization and pasteurization of milk (nearly two hundred infants being fed daily). Careful observations have been made for a period of over five years on all the infants, about twenty-five thousand in number, and accurate knowledge as to the exact method of feeding was obtained.

Of those infants that were fed on sterilized or pasteurized milk continuously, or part of the time on one and part of the time on the other, ninety-seven per cent. developed scurvy or rickets or a combination of the two, the so-called scurvy-rickets of the English authors. These infants had been fed for a varying period of from three to eighteen months on the heated milk; pasteurized milk was given during nine months of the year and sterilized milk during the three summer months. This milk was all carefully modified to suit the age and digestion of each individual infant. About twenty per cent. of the infants had five feedings a day, supplemented by breast feedings. These also had signs and symptoms of rickets, but in a degree less than those who were fed exclusively on pasteurized or sterilized milk. No infants fed on *modified raw* milk developed rickets or scurvy or any other disease due to improper feeding, such as anæmia, malnutrition, marasmus, etc.

According to Koplik, manifestations of rickets may show in the *bones* at autopsy when no symptoms have shown during life, but these children had been fed on foods which are known to produce rickets. I have seen great numbers of infants with the earliest symptoms of rickets, and spongy or bleeding gums of varying intensity, but with no other symptoms of infantile scurvy; and also numerous other infants with purpuric hæmorrhages and slight sponginess of the gums. The majority of these infants, it was found, were fed on sterilized or pasteurized milk, and promptly responded to the use of raw milk with no other treatment. The greatest number of my cases of scurvy have been of this mild

type or early stage of the disease, but which were just as much infantile scurvy as those with more pronounced symptoms of periosteal hæmorrhage, pseudoparalysis, pain, fever, prostration, etc.

These conclusions, based on observations at our own laboratories, are substantiated by investigations which I have made on infants fed at other laboratories and at home. It has been found that every infant suffering from rickets, scurvy, malnutrition, etc., that has come to our notice, and that has not been fed on any of the patent baby foods, has, however, been fed for varying periods on pasteurized or sterilized milk.

It would seem, then, that there was a common cause of disease in these cases; namely, the use of sterilized or pasteurized milk.

Being anxious to know whether sterilization and pasteurization of milk was the entire cause of these diseases, raw milk was substituted, with no other treatment, whereupon the children immediately began to improve.

Infants which were in good health when fed raw milk, were attacked with symptoms of rickets when sterilized or pasteurized milk was given.

Those who have had a large experience working among the poor of our city, and know the gross ignorance displayed by the mothers in the feeding of their infants, fully realize the fact that the reduced mortality from diarrhoeal diseases of recent years has been due not to the fact that the milk has been sterilized or pasteurized, but to the improved method of feeding by the modification of the milk to suit the age and wants of the child, and putting the milk up in stoppered nursing bottles that are kept on ice until the time of using; also, a better grade of milk has been used.

It might be interesting to note here that T. M. Price, chemist at the Maryland Agricultural Experiment Station, made a series of experiments on calves, to ascertain the comparative nutritive value and digestibility of pasteurized, sterilized and raw milk. The result of these experiments showed that:—

1. More fat and proteid were digested when raw milk was given than when pasteurized milk was given.

2. More proteid and fat were digested when pasteurized than when sterilized milk was given.

3. More proteid and fat were digested when raw milk was given than when sterilized milk was given.

4. Calves gained more when raw milk was fed than when pasteurized milk was fed, and still more than when sterilized milk was fed.

5. Calves lost on sterilized milk, were stationary or gained very slowly on pasteurized milk, and gained rapidly on raw milk.

6. Diarrhoea was set up in calves by the use of sterilized milk, and

stopped when raw milk was fed. Since these experiments show definitely the effect of sterilization and pasteurization of milk upon young animals, it is natural to conclude a similar effect upon infants. The most characteristic feature distinguishing sterilized from raw milk is the state in which the albumin exists, and Richmond says that this is changed from a soluble to a colloidal form; and not more than one per cent. of albumin is found in sterilized milk in a soluble form, while in raw milk over four per cent. is in a soluble form. The appended table, from Richmond's "Dairy Chemistry," shows the percentage of soluble albumin in milk at various temperatures:—

TIME OF HEATING.	Soluble Albumin in Fresh Milk (Per Cent.).	Soluble Albumin in Heated Milk (Per Cent.).
10 minutes, 60° C.,	0.423	0.418
30 minutes, 60° C.,	0.435	0.427
10 minutes, 65° C.,	0.395	0.365
30 minutes, 65° C.,	0.395	0.363
10 minutes, 70° C.,	0.422	0.269
30 minutes, 70° C.,	0.421	0.253
10 minutes, 75° C.,	0.380	0.07
30 minutes, 75° C.,	0.380	0.05
10 minutes, 80° C.,	0.375	None.
30 minutes, 80° C.,	0.375	None.

Koplik has shown by chemical tests that more nitrogen is assimilated by the infant from milk that has been subjected to little or no heat.

There is one apparent exception to what has been said in regard to raw milk, namely, I have seen cases of rickets develop in infants who were fed for too prolonged a period on poor-quality breast milk or poor-quality and much-diluted cows' milk; and here again we have the same or a similar condition prevailing that we see in the use of heated milk, namely, deficiency of proteids and salts. When these infants were given a milk of sufficient strength for their age, immediate and permanent improvement was noted, with a healthy, steady growth.

Then it would seem the above-mentioned diseased conditions are brought about by deficiency and change of the proteid molecule and the alkaline earthy salts organically combined, this condition of unabsorbability being caused by superheat.

Landois, in speaking of rickets, says: "The normal nutrition of muscular tissue can only take place if sufficient supply of sodium chloride and potassium salts is provided in the food, as they are integral constituents of muscular tissue; otherwise, the muscles atrophy and their reconstruction is prevented. In such conditions the central nervous system and the digestive apparatus also suffer, and the animals perish."

This, no doubt, accounts for the frequent occurrence of convulsions in rickets.

Conclusion. — In closing, it would seem, then, after careful clinical observation of many cases substantiated by chemical research and bacteriological findings, that the conclusion to be drawn must be that the advantages of the raw milk, when properly used, far outweigh any advantages which highly heated milk may possess; and if milk is heated, it should never be raised above a temperature of 140° F. for twenty to thirty minutes.

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WEEKLY RETURNS OF DEATHS FROM CITIES AND TOWNS OF MORE THAN 10,000 POPULATION.

WEEK ENDING MARCH 7, 1908.

CITIES AND TOWNS.	Population, ¹ Esti- mated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	617,082	220	46	38	29	27	3	—	1
Worcester,	134,341	57	14	6	12	4	1	—	—
Fall River,	106,305	50	14	15	7	5	—	—	—
Cambridge,	100,922	20	8	4	4	1	1	—	—
Lowell,	96,380	47	9	6	11	5	—	1	—
Lynn,	82,661	21	5	5	—	—	3	—	—
New Bedford,	82,580	28	13	8	7	7	—	—	—
Springfield,	81,425	26	6	4	7	3	—	—	—
Lawrence,	78,000	28	14	9	5	6	—	1	—
Somerville,	74,295	14	0	2	3	2	—	—	—
Brockton,	53,131	12	5	3	—	3	—	—	—
Holyoke,	52,652	20	2	2	2	2	—	—	—
Malden,	40,929	15	6	3	—	1	1	—	1
Chelsea,	39,363	15	3	2	—	1	—	—	—
Newton,	38,919	12	3	1	2	—	—	—	—
Salem,	38,666	16	6	5	—	1	2	—	—
Haverhill,	38,228	12	1	1	2	1	—	—	—
Fitchburg,	33,948	11	1	2	1	2	—	—	—
Everett,	32,415	6	4	1	—	—	—	—	1
Taunton,	30,967	14	3	5	2	3	—	—	1
Quincy,	30,924	6	1	1	1	1	—	—	—
Waltham,	28,120	6	1	1	1	—	—	—	—
Pittsfield,	27,168	10	3	1	2	1	—	—	—
Gloucester,	26,011	6	2	—	—	—	—	—	—
Brookline,	25,825	8	—	1	1	1	—	—	—
North Adams,	22,150	6	1	1	1	1	—	—	—
Chicopee,	20,831	9	6	1	1	1	—	—	—
Northampton,	20,789	11	3	—	1	—	—	—	—
Medford,	20,605	8	1	1	2	1	—	—	—
Beverly,	16,088	3	—	—	1	—	—	—	—
Leominster,	15,578	—	—	—	—	—	—	—	—
Hyde Park,	15,327	0	—	—	—	—	—	—	—
Melrose,	15,160	3	0	—	—	—	—	—	—
Newburyport,	14,794	—	—	—	—	—	—	—	—
Woburn,	14,492	5	0	—	—	—	—	—	—
Westfield,	14,457	—	—	—	—	—	—	—	—
Marlborough,	14,359	2	1	—	1	—	—	—	—
Revere,	14,248	3	1	—	—	—	—	—	—
Attleborough,	13,600	2	1	—	—	—	—	—	—
Peabody,	14,144	—	—	—	—	—	—	—	—
Adams,	13,375	7	4	—	1	—	—	—	—
Clinton,	13,105	5	2	—	1	—	—	—	—
Gardner,	12,794	4	3	—	1	—	—	—	—
Milford,	12,565	4	—	—	2	—	—	—	—
Watertown,	12,306	2	1	—	—	—	—	—	—
Plymouth,	12,149	—	—	—	—	—	—	—	—
Weymouth,	11,744	—	—	—	—	—	—	—	—
Framingham,	11,698	3	1	1	—	1	—	—	—
Southbridge,	11,630	—	—	—	—	—	—	—	—
Wakefield,	10,903	—	—	—	—	—	—	—	—
Webster,	10,825	—	—	—	—	—	—	—	—
Arlington,	10,307	2	—	—	—	—	—	—	—

Recapitulation.

Total of reporting towns, .	2,265,056	759	195	130	111	81	11	2	4
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¹ The populations were estimated upon the rate of growth from 1900 to 1905. Those of Taunton, Gloucester, North Adams and Clinton were allowed to stand as in 1905, having shown no increase during the five-year period. The gain in the population of Lowell is due to the annexation of a part of the town of Tewksbury. The population of Lawrence by the census of 1905 was 70,050, but, owing to the building of the new Wood and Arlington mills, employing at present some 3,000 operatives; an increase of about 8,000 is estimated by the Lawrence board of health, or 78,000.

WEEK ENDING MARCH 14, 1908.

CITIES AND TOWNS.	Population. Esti- mated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —						
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.	
Boston,	617,082	226	59	47	36	27	3	3	—	
Worcester,	134,341	51	13	8	3	3	2	1	—	
Fall River,	106,305	64	21	16	14	8	—	1	1	
Cambridge,	100,922	27	9	3	4	3	—	—	—	
Lowell,	96,380	44	17	4	11	2	1	—	—	
Lynn,	82,661	24	8	2	—	—	1	—	—	
New Bedford,	82,580	33	12	5	9	3	1	—	—	
Springfield,	81,425	31	6	3	5	2	—	—	—	
Lawrence,	78,000	24	11	5	5	2	—	—	1	
Somerville,	74,295	22	1	1	5	1	—	—	—	
Brockton,	53,131	18	3	4	1	4	—	—	—	
Holyoke,	52,652	9	4	2	2	2	—	—	—	
Malden,	40,929	7	3	1	1	1	—	—	—	
Chelsea,	39,363	19	6	3	—	2	—	—	—	
Newton,	38,919	5	2	—	1	—	—	—	—	
Salem,	38,666	17	7	3	—	1	—	—	—	
Haverhill,	38,228	10	4	1	—	—	—	—	1	
Fitchburg,	33,948	7	5	—	2	—	—	—	—	
Everett,	32,415	7	3	1	—	—	—	—	—	
Taunton,	30,967	15	3	1	4	—	—	—	—	
Quincy,	30,924	9	5	—	1	—	—	—	—	
Waltham,	28,120	9	2	—	2	—	—	—	—	
Pittsfield,	27,168	—	—	—	—	—	—	—	—	
Gloucester,	26,011	6	2	2	—	2	—	—	—	
Brookline,	25,825	11	1	—	1	—	—	—	—	
North Adams,	22,150	2	—	—	—	—	—	—	—	
Chicopee,	20,831	9	7	3	2	—	—	—	—	
Northampton,	20,789	10	1	1	1	—	—	—	—	
Medford,	20,605	2	—	1	—	1	—	—	—	
Beverly,	16,088	3	—	—	1	—	—	—	—	
Leominster,	15,578	6	3	—	1	—	—	—	—	
Hyde Park,	15,327	4	2	—	—	—	—	—	—	
Melrose,	15,160	6	0	1	1	1	—	—	—	
Newburyport,	14,794	—	—	—	—	—	—	—	—	
Woburn,	14,492	6	0	—	—	—	—	—	—	
Westfield,	14,457	7	1	1	—	1	—	—	—	
Marlborough,	14,359	2	1	—	—	—	—	—	—	
Revere,	14,248	2	—	1	1	1	—	—	—	
Attleborough,	13,600	4	1	—	1	—	—	—	—	
Peabody,	14,144	—	—	—	—	—	—	—	—	
Adams,	13,375	9	2	3	—	1	1	—	1	
Clinton,	13,105	5	4	—	3	—	—	—	—	
Gardner,	12,794	12	5	2	2	1	—	—	—	
Milford,	12,565	3	1	2	—	2	—	—	—	
Watertown,	12,306	1	0	—	—	—	—	—	—	
Plymouth,	12,149	—	—	—	—	—	—	—	—	
Weymouth,	11,744	3	0	—	1	—	—	—	—	
Framingham,	11,698	4	—	—	—	—	—	—	—	
Southbridge,	11,630	7	3	—	—	—	—	—	—	
Wakefield,	10,903	—	—	—	—	—	—	—	—	
Webster,	10,825	—	—	—	—	—	—	—	—	
Arlington,	10,307	2	—	1	—	—	—	—	—	

Recapitulation.

Total of reporting towns, .	2,291,297	804	238	128	121	71	9	5	4
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WEEK ENDING MARCH 21, 1908.

CITIES AND TOWNS.	Population. Esti- mated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM—					
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	617,082	236	62	40	39	25	5	-	1
Worcester,	134,341	46	17	4	11	2	1	-	-
Fall River,	106,305	40	17	8	15	3	-	-	-
Cambridge,	100,922	36	12	4	7	-	2	-	-
Lowell,	96,380	46	14	9	7	5	1	-	-
Lynn,	82,661	24	2	3	-	2	-	-	-
New Bedford,	82,580	38	20	8	14	2	1	1	2
Springfield,	81,425	21	7	4	2	2	1	-	-
Lawrence,	78,000	24	9	3	4	1	-	1	-
Somerville,	74,295	12	3	2	2	1	-	-	-
Brockton,	53,131	10	1	1	1	1	-	-	-
Holyoke,	52,652	18	11	4	5	1	3	-	-
Malden,	40,929	17	5	1	-	-	-	-	-
Chelsea,	39,363	19	6	5	-	2	-	-	1
Newton,	38,919	7	2	-	2	-	-	-	-
Salem,	38,666	10	5	2	-	2	-	-	-
Haverhill,	38,228	11	1	1	2	1	-	-	-
Fitchburg,	33,948	6	2	-	1	-	-	-	-
Everett,	32,415	12	3	4	-	1	1	-	-
Taunton,	30,967	13	1	4	2	3	-	-	-
Quincy,	30,924	8	3	-	2	-	-	-	-
Waltham,	28,120	3	-	-	1	-	-	-	-
Pittsfield,	27,168	-	-	-	-	-	-	-	-
Gloucester,	26,011	9	3	2	-	1	-	-	-
Brookline,	25,825	8	2	-	1	-	-	-	-
North Adams,	22,150	3	1	1	-	1	-	-	-
Chicopee,	20,831	7	3	2	2	-	-	-	-
Northampton,	20,789	6	2	1	1	-	-	-	-
Medford,	20,605	4	-	1	-	-	-	-	-
Beverly,	16,088	4	-	1	1	1	-	-	-
Leominster,	15,578	2	1	-	-	-	-	-	-
Hyde Park,	15,327	2	1	-	-	-	-	-	-
Melrose,	15,160	3	0	-	1	-	-	-	-
Newburyport,	14,794	-	-	-	-	-	-	-	-
Woburn,	14,492	2	0	-	-	-	-	-	-
Westfield,	14,457	2	-	1	-	1	-	-	-
Marlborough,	14,359	3	3	-	2	-	-	-	-
Revere,	14,248	3	2	-	-	-	-	-	-
Attleborough,	13,600	4	0	1	1	-	-	-	-
Peabody,	14,144	-	-	-	-	-	-	-	-
Adams,	13,375	7	2	-	-	-	-	-	-
Clinton,	13,105	5	1	-	-	-	-	-	-
Gardner,	12,794	4	2	1	-	-	-	-	-
Milford,	12,565	7	-	-	1	-	-	-	-
Watertown,	12,306	5	2	2	1	2	-	-	-
Plymouth,	12,149	-	-	-	-	-	-	-	-
Weymouth,	11,744	2	0	1	1	1	-	-	-
Framingham,	11,698	8	1	-	3	-	-	-	-
Southbridge,	11,630	-	-	-	-	-	-	-	-
Wakefield,	10,903	-	-	-	-	-	-	-	-
Webster,	10,825	-	-	-	-	-	-	-	-
Arlington,	10,307	1	-	-	-	-	-	-	-

Recapitulation.

Total of reporting towns, .	2,279,667	758	229	121	132	61	15	2	4
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WEEK ENDING MARCH 28, 1908.

CITIES AND TOWNS.	Population. Estimated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —						
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.	
Boston,	617,082	281	84	61	50	39	4	1	4	4
Worcester,	134,341	52	14	10	5	5	3	-	-	-
Fall River,	106,305	43	26	10	10	5	1	-	-	-
Cambridge,	100,922	34	8	9	7	6	-	-	1	1
Lowell,	96,380	36	9	5	5	4	-	-	-	-
Lynn,	82,661	16	4	5	-	3	-	-	-	-
New Bedford,	82,580	52	18	9	11	4	2	-	-	-
Springfield,	81,425	21	5	3	3	2	-	-	-	-
Lawrence,	78,000	31	13	7	8	3	-	1	-	-
Somerville,	74,295	26	8	2	4	1	-	-	-	-
Brockton,	53,131	9	5	1	3	-	-	-	-	-
Holyoke,	52,652	15	8	3	5	2	-	-	-	-
Malden,	40,929	12	4	3	2	2	-	-	1	1
Chelsea,	39,363	13	4	4	-	2	-	-	2	2
Newton,	38,919	7	1	1	1	1	-	-	-	-
Salem,	38,666	19	8	3	-	1	1	-	-	-
Haverhill,	38,228	9	3	-	2	-	-	-	-	-
Fitchburg,	33,948	8	2	-	-	-	-	-	-	-
Everett,	32,415	4	0	1	-	1	-	-	-	-
Taunton,	30,967	10	2	1	2	1	-	-	-	-
Quincy,	30,924	-	-	-	-	-	-	-	-	-
Waltham,	28,120	7	1	1	1	1	-	-	-	-
Pittsfield,	27,168	-	-	-	-	-	-	-	-	-
Gloucester,	26,011	7	2	2	-	1	1	-	-	-
Brookline,	25,825	2	-	1	-	1	-	-	-	-
North Adams,	22,150	7	1	1	1	1	-	-	-	-
Chicopee,	20,831	7	3	2	1	1	-	-	-	-
Northampton,	20,789	7	4	-	1	-	-	-	-	-
Medford,	20,605	2	-	-	-	-	-	-	-	-
Beverly,	16,088	4	3	2	1	1	-	-	-	-
Leominster,	15,578	2	-	-	-	-	-	-	-	-
Hyde Park,	15,327	5	2	-	2	-	-	-	-	-
Melrose,	15,160	5	1	-	-	-	-	-	-	-
Newburyport,	14,794	-	-	-	-	-	-	-	-	-
Woburn,	14,492	5	1	-	-	-	-	-	-	-
Westfield,	14,457	-	-	-	-	-	-	-	-	-
Marlborough,	14,359	2	1	-	-	-	-	-	-	-
Revere,	14,248	3	-	1	-	1	-	-	-	-
Attleborough,	13,600	1	0	-	-	-	-	-	-	-
Peabody,	14,144	-	-	-	-	-	-	-	-	-
Adams,	13,375	1	1	-	-	-	-	-	-	-
Clinton,	13,105	4	0	1	-	-	-	-	-	-
Gardner,	12,794	4	3	-	-	-	-	-	-	-
Milford,	12,565	7	-	1	-	1	-	-	-	-
Watertown,	12,306	1	0	-	-	-	-	-	-	-
Plymouth,	12,149	-	-	-	-	-	-	-	-	-
Weymouth,	11,744	3	0	-	1	-	-	-	-	-
Framingham,	11,698	3	-	-	1	-	-	-	-	-
Southbridge,	11,630	7	2	1	-	1	-	-	-	-
Wakefield,	10,903	-	-	-	-	-	-	-	-	-
Webster,	10,825	-	-	-	-	-	-	-	-	-
Arlington,	10,307	2	-	-	-	-	-	-	-	-

Recapitulation.

Total of reporting towns,	2,245,916	796	251	151	127	91	12	2	8
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WEEKLY RETURNS OF DEATHS FROM CERTAIN INFECTIOUS DISEASES.

DEATHS FROM INFECTIOUS DISEASES NOT SPECIFICALLY MENTIONED IN ABOVE TABLES DURING THE WEEKS OF MARCH 7, 14, 21 AND 28.

DISEASE.	Place.	WEEK ENDING —			
		Mar. 7.	Mar. 14.	Mar. 21.	Mar. 28.
Cerebro-spinal meningitis,	Boston, . . .	1	6	1	3
	Attleborough, . . .	—	—	1	—
	Chelsea, . . .	—	1	—	—
	Fall River, . . .	—	1	—	—
	Gloucester, . . .	—	—	1	—
	Lawrence, . . .	1	—	—	—
	Lowell, . . .	—	—	2	1
	Lynn, . . .	—	—	—	1
	Newton, . . .	1	—	—	—
	New Bedford, . . .	—	—	1	—
	Salem, . . .	1	2	—	—
Erysipelas,	Waltham, . . .	1	—	—	—
	Worcester, . . .	—	—	—	1
	Boston, . . .	1	4	2	3
	Lawrence, . . .	—	—	1	—
	Northampton, . . .	—	1	—	—
	Taunton, . . .	1	—	—	—
	Beverly, . . .	—	—	—	1
	Boston, . . .	—	—	—	1
	Cambridge, . . .	—	—	1	—
	Chelsea, . . .	—	—	2	—
	Everett, . . .	—	—	2	—
Whooping cough,	Fall River, . . .	1	—	—	—
	Gardner, . . .	—	—	1	—
	Lawrence, . . .	1	—	—	—
	Lowell, . . .	—	1	—	—
	Lynn, . . .	—	—	—	1
	Northampton, . . .	—	—	1	—
	Somerville, . . .	—	—	1	—
	Arlington, . . .	—	1	—	—
	Boston, . . .	1	1	2	2
	Cambridge, . . .	1	—	1	1
	Chelsea, . . .	1	—	—	—
Scarlet fever,	Chicopee, . . .	—	3	2	1
	Everett, . . .	—	1	—	—
	Fall River, . . .	1	—	2	3
	Lawrence, . . .	—	—	—	2
	Lowell, . . .	—	—	1	—
	Lynn, . . .	1	1	1	—
	Malden, . . .	—	—	1	—
	Medford, . . .	—	—	1	—
	New Bedford, . . .	1	—	—	2
	Springfield, . . .	1	—	—	1
	Somerville, . . .	—	—	—	1
Influenza,	Worcester, . . .	—	—	1	1
	Gardner, . . .	—	1	—	—
	Salem, . . .	1	—	—	—
	Lynn, . . .	1	—	—	—
	Salem, . . .	—	—	—	1
	Tubercular meningitis, . . .	—	—	—	—
	Tubercular enteritis, . . .	—	—	—	—
	Salem, . . .	—	—	—	1
	Tubercular meningitis, . . .	—	—	—	—
	Tubercular enteritis, . . .	—	—	—	—
	Salem, . . .	—	—	—	1

WEEKLY RETURNS OF CASES OF INFECTIOUS DISEASES.

CASES OF INFECTIOUS DISEASES REPORTED DURING THE WEEKS OF MARCH
7, 14, 21 AND 28, 1908.

[Under the provisions of section 52 of chapter 75 of the Revised Laws.]

	WEEK ENDING—			
	Mar. 7.	Mar. 14.	Mar. 21.	Mar. 28.
Diphtheria,	160	173	169	187
Measles,	750	771	776	923
Scarlet fever,	212	248	202	240
Typhoid fever,	12	9	20	20
Phthisis,	97	138	142	119
Cerebro-spinal meningitis,	5	7	9	7
Whooping cough,	17	21	19	11
Varicella,	32	29	33	27
Erysipelas,	—	1	—	1
Ophthalmia neonatorum,	—	1	1	—
Mumps,	2	—	—	2
Tubercular meningitis,	—	—	1	—
Tubercular peritonitis,	—	—	—	1

MONTHLY REPORT ON INSPECTION OF FOOD AND DRUGS.

The following summary presents the results of the examination of food and drugs made by the State Board of Health during the month of March, 1908:—

ARTICLES EXAMINED.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.	ARTICLES EXAMINED.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.
Butter,	3	3	6	Lard,	2	—	2
Canned goods,	9	—	9	Lemon extract,	1	—	1
Cheese,	1	—	1	Malt liquors,	3	—	3
Cider,	2	3	5	Milk,	91	172	263
Coffee substitute,	1	—	1	Maple sugar,	10	6	16
Cocoa and chocolate,	4	2	6	Maple syrup,	2	—	2
Confectionery,	4	—	4	Meat products:—			
Condensed milk,	2	1	3	Beef extract,	1	—	1
Cornstarch,	3	—	3	Hamburg steak,	6	1	7
Cream of tartar,	1	—	1	Head cheese,	1	—	1
Drugs,	48	33	81	Mince meat,	2	—	2
Eggs broken and mixed,	2	—	2	Sausages,	7	—	7
Grape juice,	4	—	4	Pickles,	14	1	15
Gluten preparations,	4	—	4	Potato flour,	3	—	3
Honey,	1	—	1	Spices,	4	—	4
Jams and jellies,	6	—	6	Table sauces,	5	1	6
				Vinegar,	11	4	15
				Total,	258	227	485

The samples of drugs found to be adulterated were alcohol, gin, oil of cinnamon, olive oil, spirits of camphor, whiskey, brandy, tincture of iodine and several proprietary medicines.

The cities and towns in which samples were collected were: Andover, Belmont, Beverly, Boston, Brockton, Brookline, Cambridge, Chelmsford, Chelsea, Danvers, Lawrence, Lowell, Lynn, Malden, Maynard, Methuen, Melrose, Natick, Newburyport, Newton, North Andover, Rowley, Quincy, Salem, Sharon, Sudbury, Taunton, Waltham, Watertown and Woburn.

PROSECUTIONS FOR VIOLATIONS OF THE LAW RELATING TO FOOD AND DRUGS.

Forty convictions were secured during the month of March, 1908, for selling adulterated food and drugs and preparations containing cocaine, as follows:—

No.	Name of Defendant.	Place.	Character of Article sold.
1	Austin L. Cannon,	Boston,	Alcohol; 73.93 per cent.
2	Michael Carney,	Lawrence,	Alcohol.
3	Mark H. Crehan,	Roxbury,	Alcohol; 49.91 per cent.
4	Joseph Dine,	Boston,	Alcohol; 81.40 per cent.
5	John J. Healy,	Boston,	Alcohol; 49.50 per cent.
6	John F. Holland,	Boston,	Alcohol; 85.26 per cent.
7	Henry J. Koellen,	Lawrence,	Alcohol; 83.60 per cent.
8	Thos. J. Mitchell,	Boston,	Alcohol; 75.01 per cent.
9	John R. Magullion,	Boston,	Alcohol; 82.58 per cent.
10	John F. O'Neil,	Boston,	Alcohol; 60.52 per cent.
11	Benj. Starr,	Boston,	Alcohol; 76.05 per cent.
12	Walter L. Conwell,	Boston,	Cocaine catarrh powder ("Standard").
13	James J. Cramer,	Boston,	Cocaine catarrh powder ("Standard").
14	James J. Cramer,	Boston,	Cocaine catarrh powder ("Standard").
15	James J. Cramer,	Boston,	Cocaine catarrh powder ("Crown").
16	Fred. A. Ewell,	Boston,	Cocaine catarrh powder ("A No. 1").
17	Fred. A. Ewell,	Boston,	Cocaine catarrh powder ("A No. 1").
18	Fred. A. Ewell,	Boston,	Cocaine catarrh powder ("A No. 1").
19	Herbert L. Erskine,	Boston,	Cocaine catarrh powder ("Standard").
20	Herbert L. Erskine,	Boston,	Cocaine catarrh powder ("Standard").
21	Ernest Kelley,	Lynn,	Cocaine catarrh powder ("Standard").
22	Ernest Kelley,	Lynn,	Cocaine catarrh powder ("Standard").
23	Ernest Kelley,	Lynn,	Cocaine catarrh powder ("Standard").

No.	Name of Defendant.	Place.	Character of Article sold.
24	Jos E. Lombardi,	Boston,	Cocaine catarrh powder ("Standard").
25	Harry Naldrett,	Boston,	Cocaine catarrh powder ("Standard").
26	Geo. F. Ramponi,	Boston,	Cocaine catarrh powder ("A No. 1").
27	Louis Richards (clerk for M. Boyajian).	Boston,	Cocaine catarrh powder ("Standard").
28	Frank E. Shea,	Boston,	Cocaine catarrh powder ("Standard").
29	Frank E. Shea,	Boston,	Cocaine catarrh powder ("Standard").
30	Geo. H. Bosh,	Lawrence,	Chili sauce. ¹
31	Chas. E. Sleeper,	Boston,	Cider. ¹
32	Chas. E. Sleeper,	Boston,	Grape juice.
33	George R. Myers,	Lowell,	Hamburg steak. ²
34	Truman D. Thorpe,	East Boston,	Hamburg steak.
35	Geo. M. Adams,	Methuen,	Milk (total solids, 11.44).
36	Robert E. Carlton,	Methuen,	Milk (total solids, 11.46).
37	Lester J. Carter,	Waltham,	Milk (total solids, 11.13).
38	Samuel P. Pike,	Lowell,	Milk (total solids, 11.48).
39	George Taylor,	Methuen,	Milk (total solids, 11.45).
40	George H. Bosh,	Lawrence,	Raspberries (preserved). ¹

¹ Contained benzoic acid.² Contained sulphurous acid.

Fines imposed, \$1,130.

LIST OF ADULTERATED OR IMPROPERLY LABELLED FOODS, ETC., FOR MARCH, 1908.

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
7424	"Fry's Caracas Cocoa,"	J. S. Fry & Sons, Ltd., Bristol and London, Eng.,	Large admixture of cane sugar and arrowroot; improperly labelled.
7422	Tomato flip,	Tomato Flip Company, Chicago,	Preserved with benzoic acid.
7012 M	Milk,		Total solids, 11.38 per cent.; contained added water.
7014 M	Milk,		Total solids, 11.15 per cent.; contained added water.
7016 M	Milk,	Antonio Tavolieri, Sudbury,	Total solids, 11.00 per cent.; contained added water.
1379 P	Milk,	N. Burns & Co., Saugus,	Total solids, 11.22 per cent.; contained added water.
q-134	Milk,		Total solids, 8.92 per cent.; contained added water.
q-136	Milk,		Total solids, 9.37 per cent.; contained added water.
q-137	Milk,	Alexander Mura, Andover,	Total solids, 9.00 per cent.; contained added water.
1321 P	Az-Ma-Syde,	Asthma Remedy and Manufacturing Company, Tremont Temple, Boston.	Contained cocaine.
6644 M	Dr. Stolze's Oxy-Neura,	Oxy-Neura Medicine and Publishing Company, Reading, Pa.	Alcohol, 15.68 per cent.

INSPECTION OF DAIRIES.

During the month of March, 1908, 312 dairies were examined in the following places:—

PLACE.	Number examined.	Number found to present no Objectionable Features.	Per Cent.	Number to which Letters were sent.	Per Cent.
Belchertown,	42	21	50.00	21	50.00
Dana,	1	—	—	1	100.00
Deerfield,	24	7	29.17	17	70.83
Gill,	2	2	100.00	—	—
Greenfield,	46	22	47.83	24	52.17
Hardwick,	67	37	55.22	30	44.78
Lexington,	1	—	—	1	100.00
New Braintree,	34	21	61.76	13	38.24
New Salem,	2	1	50.00	1	50.00
Orange,	28	18	64.29	10	35.71
Ware,	63	24	38.10	39	61.90
Warwick,	2	2	100.00	—	—

Total number of dairies examined,	312
Number found to be free from objectionable conditions,	155
Number to which letters were sent,	157
Total number of conditions to which attention was called,	621
Percentage of dairies which passed inspection,	49.68

The names of the owners of dairies found to be worthy of commendation follow:—

Belchertown.

Belchertown Town Farm.	Jepson, David D.	Noel, Joseph.
Blackmer, Edward.	Jepson, Henry.	Peece, A. E.
Bush, C. A.	Lamson, Amos, & Son.	Sanford, E. B.
Clough, William.	Mills, E. S.	Shea, J. D.
Gould, Henry.	Mitchel, F. J.	Spellman, Thomas.
Green, George H. B.	Morse, Joseph.	Stacy, A. F.
Howard, E. C.	Morse, M. A.	Witt, E. C.

Deerfield.

Chapin, H. S.	Randall, Joseph.	Well, H. A.
Clark, V. L.	Trask, Walter.	Wells, Frank H.
Jones, Charles.		

Gill.

Barton, Henry.	Stoughton, T.
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Greenfield.

Allen, F. J., & Son.	Darling, G. F.	Haskins, George.
Bullard, Mrs. F.	Fay, D. L.	Hawks, Frederick.
Childs, Frank.	Fletcher, H. W.	Jefford, Charles.
Cowan, Frederick.	Garrett, Frank.	Kuyla, Nelson.

Larrabee, E. N. & H. P.
Leonard, Mrs. Elizabeth.
Moore, George.
Morey, H. A.

Parmenter, E. H., & Son.
Powling, A. W., & Co.
Sessler, Frederick.

Smith, John.
Spear, George E.
Ummer Bros.

Hardwick.

Barnes, Willard H.
Carroll, Mrs. Patrick.
Clark, Frank D.
Clark, F. William.
Cleveland, Willard.
Dennis, J. G.
Dennis, Samuel S.
Emmons Bros.
Goodfield, William.
Graves, Charles H.
Hamilton, William A.
Hardwick Town Farm.
Hibbard, R. V.

Hillman, J. S.
Hillman, S. P.
Hitchcock, F. A.
Jackson, Mrs. W. O.
Jewett, Joseph Clark.
Knight, Joseph.
Marsh, A. J.
Minney, Frederick.
Mixer, George.
Newcomb, William A.
Nimtz, Herman.
Paige, Mrs. Harriet S.

Parker, George L.
Phelps, T.
Ratelle, C. J.
Robinson, W. A.
Rominisky, Joseph.
Ruggles, Louis H.
Ruggles, N. Paul.
Session, J. T.
Spooner, H. A. & S. H.
Stockwell, Sumner.
Tuttle, O. A.
Wheelock, Albert.

New Braintree.

Carroll, J.
Cooney, T. H.
Cota, George.
Gleason, Charles A.
Gray, W. J.
Happenny, E. E.
Havens, Edwin L.

Howe, E. A.
Litchfield, George A.
O'Brien, John.
Pepper, Henry A.
Pollard, Herbert L.
Potter, F. W.
Scoville, W. M.

Slein, Patrick.
Snow, G. F.
Tyler, Charles W.
Utley, James P.
Webb, Thomas.
Wine, John.
Zelesky, Felix.

New Salem.

Chamberlain, Herbert.

Orange.

Batchelder, Alfred.
Blodgett, Amos.
Cobb, Charles.
Dexter, George E.
Emery, James W.
Gibbs, H. M.

Johnson, H. E.
Johnson, W. E.
Kellogg, Dwight.
Lundgren, Charles.
Martin, Walter J.
Moore, Frank C.

Robbins, Charles.
Shepardson, J. M.
Stewart, R. E.
Ward, W. A.
Warwick, Jesse.
Wheeler, John W.

Ware.

Barlow, Frederick.
Barnes, William.
Bombard, Felix.
Buffington, Charles O.
Campbell, John P.
Dragon, A. D.
Dunham, N. & P.
Green, Herbert.

Griffin, M. D.
Kruchas, Benjamin J.
Moore, E. E.
Newton, Stephen.
Richards, Marshall N.
Sanford, George M.
Sheahey, James.
Simmons, William.

Sloat, Peter C.
Smith, John.
Sturtevant, George.
Tobin, W. H.
Tucker, Harry.
Wheeler, G. O.
Winn, Rev. F. E.
Winslow, Edward.

Warwick.

Shepardson, George.

White, James.

THE PREVALENCE OF SCARLET FEVER IN MASSACHUSETTS.

It is currently reported and commonly believed that during the first three months of the present year scarlet fever has been prevalent to an extent not equalled within recent years. Examination of the returns proves that, while the disease is extensively prevalent, the number of cases reported is far smaller than for the corresponding months of 1907.

In January, February and March, 1906, there were reported 1,474 cases; during the same months of 1907, 3,342; and for the like period of 1908, 2,688.

The following table shows the number of cases reported by each community during the month of March, 1908. It will be noted that nearly a third were reported by the board of health of Boston, and that, in round numbers, the incidence of the disease in Boston, Worcester, Fall River, Cambridge and Lowell, the five largest cities in the Commonwealth, was, respectively, 1 to 2,000 population, 1 to 4,000, 1 to 5,000, 1 to 3,000. 1 to 10,000; whereas in the small town of Winthrop the ratio was 1 case to 137.

Cases of Scarlet Fever in Massachusetts reported in March, 1908.

Abington, 1	Holden, 4	Quincy, 12
Adams, 1	Holyoke, 17	Randolph, 1
Amherst, 5	Hyde Park, 3	Reading, 1
Andover, 1	Ipswich, 2	Rehoboth, 2
Arlington, 2	Lawrence, 27	Revere, 6
Attleborough, 1	Leominster, 3	Rockland, 1
Avon, 1	Lexington, 1	Rowley, 2
Bedford, 1	Lowell, 10	Salem, 8
Beverly, 14	Lynn, 36	Salisbury, 1
Boston, 319	Malden, 20	Saugus, 2
Bourne, 1	Manchester, 1	Somerset, 1
Brockton, 16	Mansfield, 4	Somerville, 13
Brookline, 5	Medford, 4	Springfield, 18
Cambridge, 34	Medway, 2	Sutton, 3
Chelmsford, 2	Melrose, 2	Swampscott, 1
Chelsea, 15	Methuen, 2	Taunton, 24
Chesterfield, 1	Middleborough, 1	Wakefield, 4
Chicopee, 21	Middlefield, 1	Walpole, 3
Dalton, 2	Millbury, 1	Waltham, 5
Danvers, 2	Milton, 3	Wareham, 1
Dedham, 3	Monson, 1	Warren, 1
Essex, 5	New Bedford, 20	Watertown, 2
Everett, 10	Newburyport, 3	Webster, 3
Fall River, 21	Newton, 7	W. Boylston, 2
Fitchburg, 5	No. Adams, 1	W. Springfield, 2
Foxborough, 2	No. Andover, 1	Westfield, 7
Franklin, 3	No. Attleborough, 1	Weymouth, 1
Gardner, 4	Northampton, 7	Whitman, 1
Gill, 1	Northborough, 8	Williamsburg, 1
Gloucester, 2	Northbridge, 5	Winchester, 1
Grafton, 17	Orange, 2	Winthrop, 54
Gt. Barrington, 5	Oxford, 1	Woburn, 10
Hardwick, 2	Palmer, 10	Worcester, 36
Harwich, 7	Pepperell, 2	
Hatfield, 1	Pittsfield, 2	
Haverhill, 1		Total, 979

MORTALITY RATES OF DIPHTHERIA AND SCARLET FEVER IN BOSTON.

Through the courtesy of Dr. John H. McCollom, of the South Department (contagious wards) of the Boston City Hospital, the following charts are presented, showing (1) the ratio of mortality of diphtheria per 10,000 population, in Boston, from 1876 to 1907, inclusive; (2) the ratio of mortality of scarlet fever per 10,000 population, in Boston, from 1841 to 1907, inclusive; (3) the ratio of morbidity and mortality per 10,000 population, in Boston, from 1886 to 1907, inclusive; and (4) the number of cases of diphtheria and scarlet fever, by months, reported in Boston, from 1890 to 1907, inclusive:—

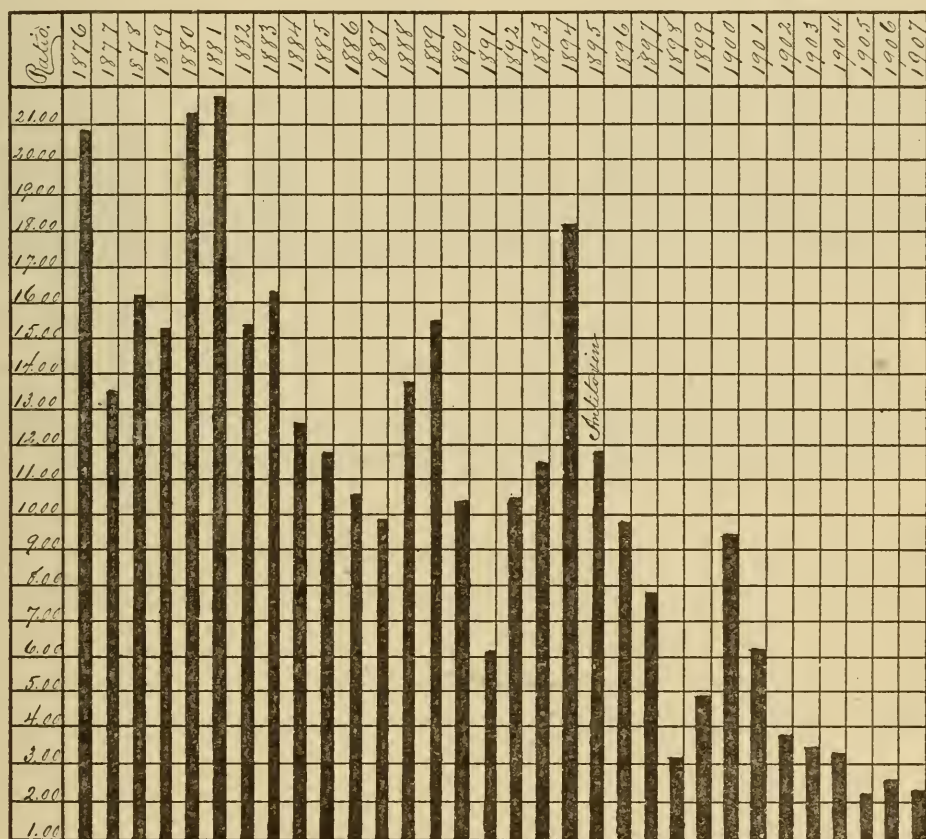


CHART I. — *Mortality Rate of Diphtheria per 10,000 of Population (Boston) from 1876 to 1907, inclusive.*

Average rate, 1876 to 1894, inclusive, equals 14.25 (before antitoxin treatment), average rate 1895 to 1907, inclusive, equals 5.48 (since antitoxin treatment).

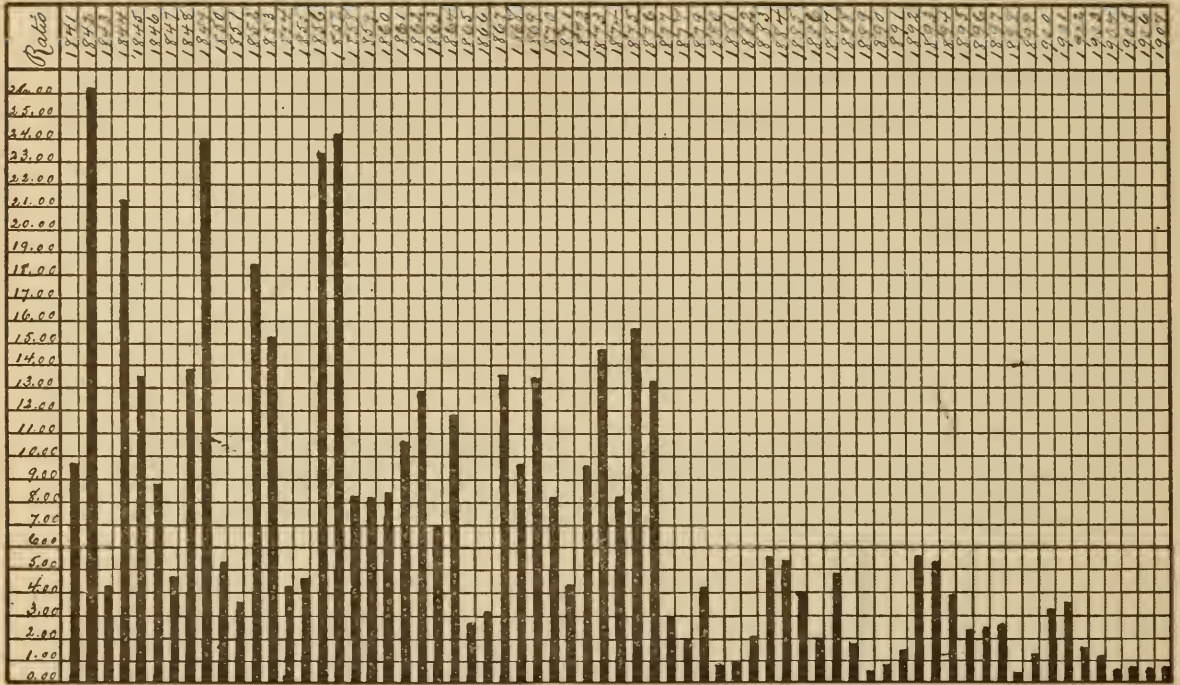


CHART 2. — *Mortality Rate of Scarlet Fever per 10,000 of Population (Boston) for Sixty-seven Years, 1841 to 1907, inclusive.*

Since the South Department was opened, in 1895, no general epidemic of scarlet fever, like those of earlier years, has occurred.

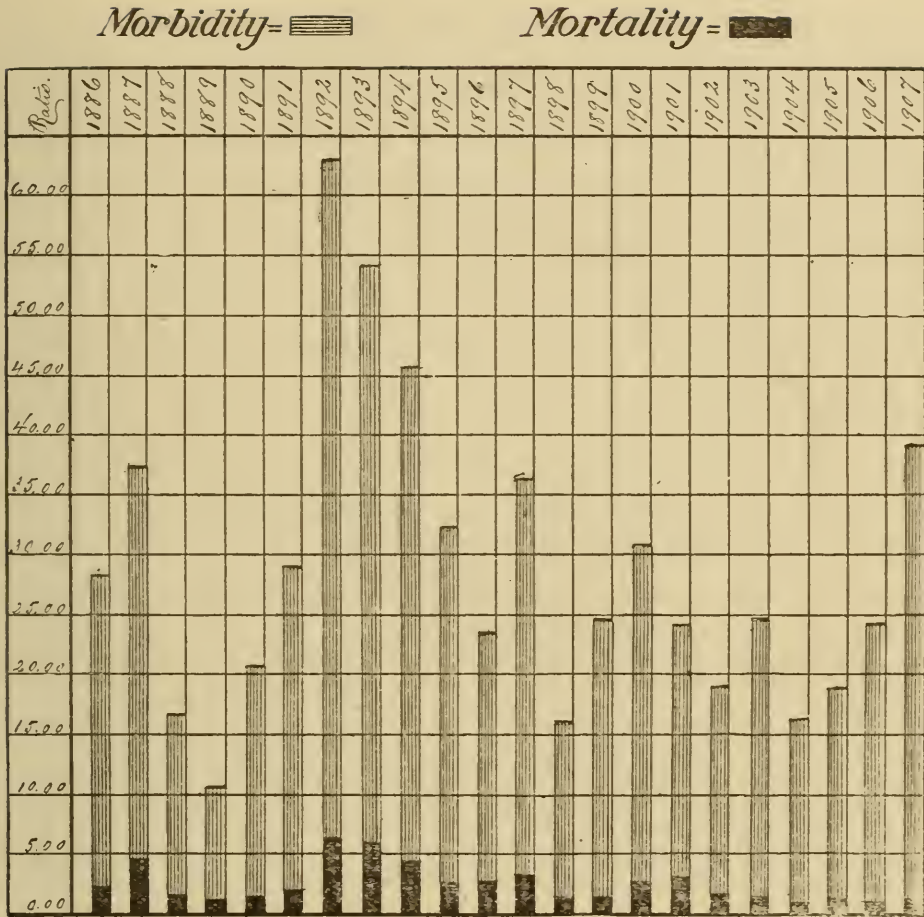


CHART 3. — *Morbidity and Mortality Rates of Scarlet Fever per 10,000 of Population (Boston) from 1886 to 1907, inclusive.*

Average morbidity from 1886 to 1894, inclusive, 33.97; average morbidity from 1895 to 1907, inclusive, 25.35; average mortality from 1886 to 1894, inclusive, 2.88; average mortality from 1895 to 1907, inclusive, 1.63.

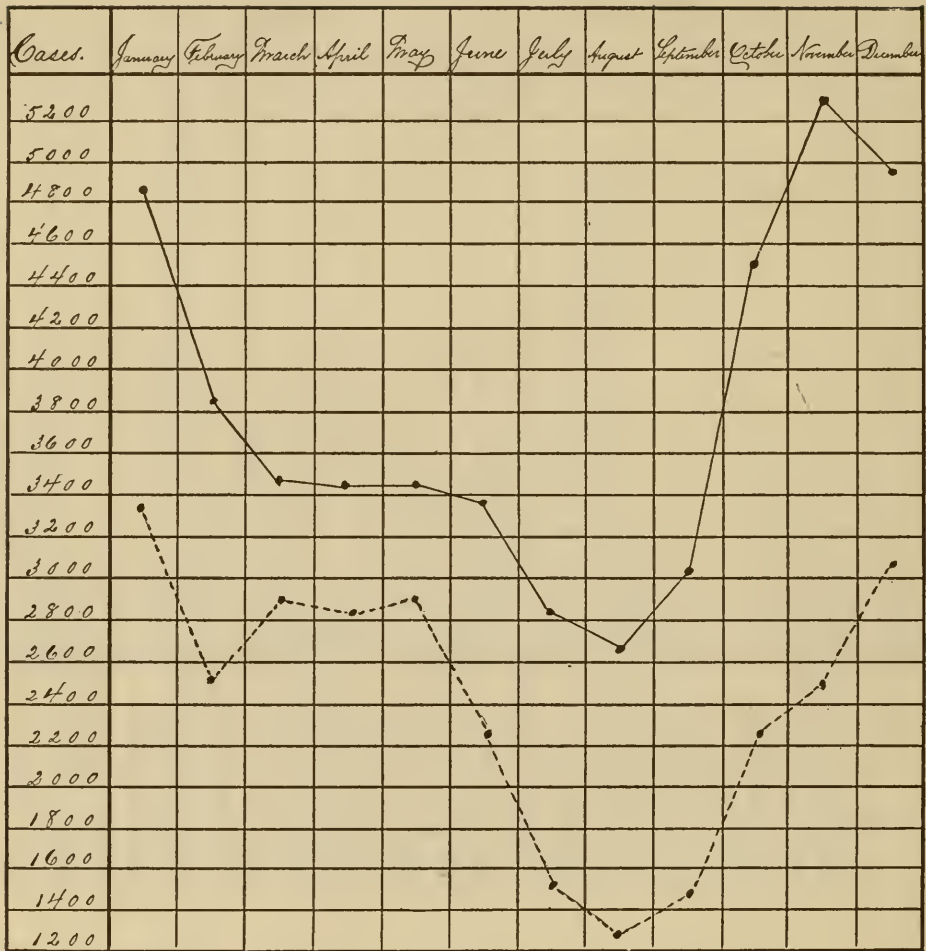


CHART 4. — *Cases of Diphtheria and Scarlet Fever reported in Boston by Months, from 1890 to 1907, inclusive.*

Diphtheria, 45,734 cases; scarlet fever, 28,792 cases; average number of cases of diphtheria, by months, during the school year, 4,028; average number during vacation months, July and August, 2,723; average number of cases of scarlet fever, by months, during the school year, 2,594; average number during vacation months, July and August, 1,425.

THE GROWTH OF TYPHOID BACTERIA IN MILK.

BY THE SECRETARY OF THE BOARD.

In Dr. E. M. Sill's paper on "Sterilized Milk," reprinted in the February "Bulletin" from the "New York Medical Journal" of Feb. 8, 1908, occurs the statement that the cause of cholera dies in one hour after introduction into fresh cow's milk, the cause of typhoid fever within twenty-four hours, and other germs after varying periods; and that "in a few instances" the germs of typhoid fever, diphtheria and scarlet fever have been spread by milk. Lest these statements be held to reflect the views of the State Board of Health, it is deemed advisable to call attention to the fact that reproduction of an article on an important subject does not necessarily imply agreement with and approval of every statement therein contained, especially those which have no more than a remote relationship to the main subject, and also to present certain testimony concerning the bactericidal property of milk and the relation of milk to typhoid outbreaks.

In 1894 Dr. W. Hesse¹ carried out some experiments which led him to these conclusions: fresh, raw cow's milk is not a good culture medium for the cholera organism, but, on the contrary, destroys it. The destructive action begins immediately after the germs are added, and the process is almost without exception completed within twelve hours at room temperature and within six to eight hours at incubator temperature. It is not dependent upon the acidity of the milk nor upon the influence of the common milk bacteria and their products; it is the manifestation of a biological property which is destroyed instantly by raising the temperature of the milk to the boiling point. On the other hand, he found sterilized milk to be an excellent material in which to cultivate the germs.

These conclusions were directly opposed to those of a number of investigators, who had determined that the period of life of cholera bacteria in milk was from one to six days, and they were attacked at once by Dr. F. Basenau,² who said:—

Raw milk does not exert any destructive influence upon cholera bacteria, as is asserted by Hesse. On the contrary, they live in practically germ-free raw milk at least thirty-eight hours, and can multiply in it even until coagulation occurs, and at any temperature at which it can grow under any circumstances. In very dirty milk they can live at least thirty-two hours, both at incubator

¹ Zeitschrift für Hygiene, XVII., p. 238.

² Archiv für Hygiene, XXIII., 1895, p. 170.

and ordinary temperatures, and they can be isolated in active condition even after the milk is clotted.

These conflicting views, and similar ones concerning other species of disease germs, have been the subject of numerous investigations concerning the actual existence of bactericidal properties in milk, which show that whether or not they exist, they are not lasting. According to Coplans,¹ fresh milk kept at room temperature is slightly bactericidal and absolutely inhibitory for six hours, and partially inhibitory for eighteen hours more; at 98.6° F. these periods are reduced to one and six hours, respectively. Koning² says that the bactericidal property appears soon after the milk is drawn, and is especially powerful in colostrum; and that *Bacillus coli* and various other species are destroyed. In agreement with Koning is Hippius,³ who found that the action upon *Bacillus coli* and *Bacillus prodigiosus* is most marked during the first three or four hours, and thereafter gradually wanes, disappearing entirely in six or seven hours. He found that it was weakened by thirty minutes' exposure of the milk to 149° F. and by two minutes' exposure to 185° F., and was killed at once by boiling.

According to W. A. Stocking⁴ and H. W. Conn, the asserted bactericidal property may be explained by the fact that certain species of bacteria which find in milk no suitable food materials die out more or less rapidly, and others multiply. Kolle⁵ and others failed to detect any bactericidal influence so far as the colon bacillus, the typhoid and the paratyphoid germs are concerned, but found that the bacillus of dysentery was inhibited and cholera organisms were partially killed.

The experiments of Eyre⁶ are especially interesting. He inoculated fresh clean milk with cultures of typhoid bacilli and saw the number per cubic centimeter fall from 78 to 42 at the end of four and six hours, and then increase to 46 at eight hours, 460 at twelve hours, and 6,000 at twenty-four hours. Thus it appears that the property was lost in four to six hours and was succeeded by a slow and then a very rapid multiplication of the bacteria.

The very careful experiments of Rosenau and McCoy⁷ led them to conclude that the diminution in numbers is apparent and not real, and due, at least in part, to agglutination. There is a real restraining action which persists for some hours, and for a longer time if the milk is kept at a low temperature.

¹ The Lancet, Oct. 19, 1907, p. 1074.

² Apotheker Zeitung, XIV., 1904, p. 730.

³ Jahrbuch für Kinderheilkunde, etc., LXI., 1905, p. 365.

⁴ Storrs Agricultural Experiment Station, Bulletin 37, 1905.

⁵ Klinische Jahrbücher, XIII., 1904.

⁶ Journal of State Medicine, XII., 1904, p. 728.

⁷ Hygienic Laboratory, Bulletin 41, Washington, 1908, p. 449.

With respect to the frequency with which typhoid fever is spread through the agency of specifically polluted milk it is necessary to cite only the fact that during recent years nearly every typhoid outbreak which has occurred in Massachusetts has been traced to it. Indeed, where public water supplies are guarded against contamination, polluted milk and other foods are the usual agents in disseminating the disease.

NEW LAW ON THE MANUFACTURE AND SALE OF ARTICLES CONTAINING COCAINE.

ACTS OF 1908, CHAPTER 307.

AN ACT TO PROHIBIT THE MANUFACTURE AND SALE OF COCAINE AND ARTICLES
CONTAINING COCAINE.

Be it enacted, etc., as follows:

SECTION 1. It shall be unlawful for any person, firm or corporation to manufacture any so-called catarrh powder or catarrh cure, or any patent or proprietary preparation containing cocaine, or any of its salts, or alpha or beta eucaine, or any of their salts, or any synthetic substitute for the aforesaid.

SECTION 2. It shall be unlawful for any person, firm or corporation to sell, exchange, deliver, expose for sale, give away or have in his possession or custody with intent to sell, exchange, deliver, or give away, in any street, way, square, park or other public place, or in any hotel, restaurant, liquor saloon, barroom, public hall, place of amusement, or public building any cocaine or any of its salts, or any alpha or beta eucaine, or any of their salts, or any synthetic substitute for the aforesaid, or any preparation containing any of the same.

SECTION 3. It shall be unlawful for any pharmacist or other person employed or serving in a pharmacy, drug store or apothecary shop, to the proprietor of which a written notice has been sent by registered mail by an officer or employee of the state board of health stating that any patent or proprietary medicine or article, naming the same, contains cocaine or any of its salts, or any alpha or beta eucaine, or any of their salts, or any synthetic substitute for the aforesaid, thereafter to sell any such medicine or article.

SECTION 4. Whoever violates any provision of this act shall be punished by a fine of not more than one thousand dollars, or by imprisonment for not more than one year in a county jail or house of correction, or by both such fine and imprisonment. [*Approved March 27, 1908.*]

SLAUGHTERING AND MEAT INSPECTION.

ACTS OF 1908, CHAPTER 329.

AN ACT RELATIVE TO THE SLAUGHTER OF ANIMALS AND TO THE INSPECTION AND SALE OF CARCASSES THEREOF.

Be it enacted, etc., as follows:

SECTION 1. The sale, offer or exposure for sale, or delivery for use as food, of the carcass, or any part or product thereof, of any animal which has come to its death in any manner or by any means otherwise than by slaughter or killing while in a healthy condition, or which at the time of its death is unfit by reason of disease, exhaustion, abuse, neglect or otherwise for use as food, or of any calf weighing less than forty pounds when dressed, with head, feet, hide and entrails removed, is hereby declared to be unlawful and prohibited. Whoever sells or offers or exposes for sale or delivers or causes or authorizes to be sold, offered or exposed for sale or delivered for use as food any such carcass or any part or product thereof, shall be punished by fine of not more than two hundred dollars or by imprisonment for not more than six months.

SECTION 2. The state board of health and its inspectors, and the state inspectors of health and all boards of health of cities and towns and their inspectors, officers, agents and assistants in their respective districts, shall have and exercise the same powers and duties in and for the enforcement of this act as are at any time conferred or imposed by law upon any board of health, inspector, officer, agent or assistant in respect of any other article or substance the sale or use of which for food is unlawful or prohibited; and it shall be their duty to seize any such carcass or part or product thereof as described in section one hereof, and cause the same to be destroyed forthwith or disposed of otherwise than for food; and all moneys received by any board of health for any property so disposed of shall, after deducting the expenses of such seizure and disposal, be paid to the owner of such property if known.

SECTION 3. Such inspectors, officers, agents and assistants shall visit and keep under observation all places within their respective districts at which neat cattle, sheep, swine or other animals intended for slaughter or for sale or use as food are delivered from transportation, and shall have at all times free access to all such places and to all railroad trains or cars or other vehicles in which such animals may be transported, for the purpose of preventing violations of this act and of detecting and punishing the same.

SECTION 4. The state inspectors of health in their respective districts, and the inspectors appointed by the state board of health for duties relative to the sale of food and drugs, shall have the same rights, powers and authority for and in respect of the inspection, seizure and disposition of all carcasses, meats and provisions which are tainted, diseased, corrupted, decayed, unwholesome, or from any cause unfit for food, or the sale of which for food

is unlawful, as are conferred by sections seventy and seventy-one of chapter fifty-six and by section one hundred and two of chapter seventy-five of the Revised Laws, or by other laws, upon boards of health of cities and towns or their inspectors in respect of the articles therein specified; with power to prosecute all offences relating thereto.

SECTION 5. In addition to the supervision now provided for by law, all slaughter houses shall be under the supervision of the state board of health and subject to inspection by the state inspectors of health in their respective districts.

SECTION 6. Section one hundred and five of chapter seventy-five of the Revised Laws, as amended by section two of chapter three hundred and twelve of the acts of the year nineteen hundred and two, and by section two of chapter two hundred and twenty of the acts of the year nineteen hundred and three, is hereby further amended by striking out all after the word "old", in the seventh line, so as to read as follows:—*Section 105.* The provisions of the six preceding sections shall not apply to a person not engaged in such business, who, upon his own premises and not in a slaughter house, slaughters his own neat cattle, sheep or swine, but the carcass of any such animals shall be inspected by an inspector at the time of slaughter, unless said animal is less than six months old.

SECTION 7. Nothing in this act shall affect or impair the rights, powers or authority of any board or officer not herein mentioned. [*Approved March 31, 1908.*]

AMENDMENT OF LAW RELATIVE TO BREAD.

ACTS OF 1908, CHAPTER 197.

AN ACT RELATIVE TO THE SALE OF BREAD.

Be it enacted, etc., as follows:

Chapter fifty-seven of the Revised Laws is hereby amended by striking out section six and inserting in place thereof the following:—*Section 6.* Whoever violates any provision of the preceding three sections shall be punished by a fine of not more than ten dollars for each offence. The sealer of weights and measures in the respective cities and towns, or the commissioner of weights and measures of the commonwealth, shall cause the provisions of the said three sections to be enforced. [*Approved March 10, 1908.*]

AMENDMENT OF FOOD AND DRUG LAW.

ACTS OF 1908, CHAPTER 238.

AN ACT RELATIVE TO THE SALE OF ADULTERATED FOOD AND DRUGS.

Be it enacted, etc., as follows:

SECTION 1. Sections twenty-five and twenty-six of chapter seventy-five of the Revised Laws, relating to the sale of adulterated foods and drugs, are hereby repealed.

SECTION 2. This act shall take effect upon its passage. [*Approved March 18, 1908.*]

The sections above mentioned were the original laws relative to adulterated foods and drugs, antedating by many years the comprehensive act (chapter 263) passed in 1882. Containing the words "knowingly" and "fraudulently," they were impossible of enforcement; providing different penalties, they were in conflict with section 24, which establishes the penalty for violations of sections 16 to 27, inclusive; and producing nothing but confusion, their repeal was most desirable.

MEDICAL INSPECTION OF SCHOOLS.

ACTS OF 1908, CHAPTER 189.

AN ACT RELATIVE TO MEDICAL INSPECTION IN PUBLIC SCHOOLS.

Be it enacted, etc., as follows:

For the purpose of furnishing schools and school committees with the material and appliances provided for by section six of chapter five hundred and two of the acts of the year nineteen hundred and six, relative to the health of children in the public schools, the state board of education may annually expend a sum not exceeding eight hundred dollars, instead of five hundred dollars, as is specified in the said section. [*Approved March 10, 1908.*]

NEW LEGISLATION ON THE SPITTING HABIT.

ACTS OF 1908, CHAPTER 150.

AN ACT TO FURTHER PROHIBIT EXPECTORATION IN CERTAIN PUBLIC PLACES AND CONVEYANCES.

Be it enacted, etc., as follows:

Section one of chapter one hundred and sixty-five of the acts of the year nineteen hundred and six, as amended by section one of chapter four hundred and ten of the acts of the year nineteen hundred and seven, is hereby further

amended by striking out the said section and inserting in place thereof the following:— *Section 1.* No person shall expectorate or spit upon any public sidewalk or upon any place used exclusively or principally by pedestrians, or, except in receptacles provided for the purpose, in or upon any part of any city or town hall, any court house or court room, any public library or museum, any church or theatre, any lecture or music hall, any mill or factory, any hall of any tenement building occupied by five or more families; any school building, any ferryboat or steamboat, any railroad car, except a smoking car, any elevated railroad car, except a smoking car, any street railway car, any railroad or railway station or waiting room, or on any track, platform or sidewalk connected therewith, and included within the limits thereof. [*Approved March 2, 1908.*]

INSTRUCTION AS TO TUBERCULOSIS.

ACTS OF 1908, CHAPTER 181.

AN ACT RELATIVE TO INSTRUCTION IN THE PUBLIC SCHOOLS AS TO TUBERCULOSIS AND ITS PREVENTION.

Be it enacted, etc., as follows:

Section one of chapter forty-two of the Revised Laws is hereby amended by inserting after the word "system", in the thirteenth line, the words:— and as to tuberculosis and its prevention,—so as to read as follows:— *Section 1.* Every city and town shall maintain, for at least thirty-two weeks in each year, a sufficient number of schools for the instruction of all the children who may legally attend a public school therein, except that in towns whose assessed valuation is less than two hundred thousand dollars, the required period may, with the consent of the board of education, be reduced to twenty-eight weeks. Such schools shall be taught by teachers of competent ability and good morals, and shall give instruction in orthography, reading, writing, the English language and grammar, geography, arithmetic, drawing, the history of the United States, physiology and hygiene, and good behavior. In each of the subjects of physiology and hygiene, special instruction as to the effects of alcoholic drinks and of stimulants and narcotics on the human system, and as to tuberculosis and its prevention, shall be taught as a regular branch of study to all pupils in all schools which are supported wholly or partly by public money, except schools which are maintained solely for instruction in particular branches. Bookkeeping, algebra, geometry, one or more foreign languages, the elements of the natural sciences, kindergarten training, manual training, agriculture, sewing, cooking, vocal music, physical training, civil government, ethics and such other subjects as the school committee consider expedient may be taught in the public schools. [*Approved March 6, 1908.*]

AMENDMENT OF SMOKE LAW.

ACTS OF 1908, CHAPTER 187.

AN ACT RELATIVE TO THE EMISSION OF SMOKE IN CITIES AND TOWNS.

Be it enacted, etc., as follows:

SECTION 1. Section one hundred and twenty-two of chapter one hundred and two of the Revised Laws is hereby amended by inserting after the word "brick", in the second line, the words: — or pottery, — so as to read as follows: — *Section 122.* The emission, except by locomotive engines or by brick or pottery kilns, into the open air of dark smoke or dense gray smoke for more than five minutes continuously, or the emission, except as aforesaid, of such smoke during ninety minutes of any continuous period of twelve hours, within a quarter of a mile of a dwelling, is hereby declared a nuisance, unless such emission is under a permit which may be granted annually by the mayor and aldermen of cities or the selectmen of towns.

SECTION 2. This act shall not apply to the city of Boston.

SECTION 3. This act shall not take effect in any city until it is accepted by a majority vote of the city council of the city, and it shall not take effect in any town until it is accepted by a majority of the voters of the town voting thereon at an annual meeting. [*Approved March 9, 1908.*]

ADMITTANCE OF HOSPITAL RECORDS AS EVIDENCE IN THE COURTS.

ACTS OF 1908, CHAPTER 269.

AN ACT TO PROVIDE THAT THE RECORDS OF CERTAIN HOSPITALS SHALL BE ADMITTED AS EVIDENCE IN THE COURTS.

Be it enacted, etc., as follows:

Section two of chapter three hundred and thirty of the acts of the year nineteen hundred and five is hereby amended by inserting after the word "records", in the first line, the words: — and similar records kept prior to April twenty-fifth, nineteen hundred and five, — so as to read as follows: — *Section 2.* Such records, and similar records kept prior to April twenty-fifth, nineteen hundred and five, shall be in the custody of the person in charge of the hospital, and shall be admissible as evidence in the courts of the commonwealth as to all matters therein contained. [*Approved March 25, 1908.*]

CONCERNING HUMIDIFYING IN FACTORIES.

ACTS OF 1908, CHAPTER 325.

AN ACT RELATIVE TO THE USE OF WATER FOR HUMIDIFYING PURPOSES.

Be it enacted, etc., as follows:

SECTION 1. The water used for humidifying purposes by any person, firm or corporation operating a factory or workshop, shall be of such a degree of purity as not to give rise to any impure or foul odors, and shall be so used as not to be injurious to the health of persons employed in such factories or workshops.

SECTION 2. Any person, firm or corporation violating any provision of this act shall, upon conviction thereof, be punished by a fine of not less than ten nor more than one thousand dollars.

SECTION 3. The state inspectors of health shall, under the direction of the state board of health, enforce the provisions of this act. [*Approved March 31, 1908.*]

**ADDITIONAL COCAINE PREPARATIONS ADVERTISED
DURING MARCH, 1908, AS UNSALABLE AT RETAIL.**

Dr. R. B. Waite's Antiseptic Local Anæsthetic for Painless Operations in All Minor Surgery. Antidolar Mfg. Co., Springville, Erie Co., N. Y.

Az-Ma-Syde. Asthma Remedy and Mfg. Co., Tremont Temple, Boston, Mass.

MONTHLY BULLETIN

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BOSTON

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1908

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WEEKLY RETURNS OF DEATHS FROM CITIES AND TOWNS OF MORE THAN 10,000 POPULATION.

WEEK ENDING APRIL 4, 1908.

CITIES AND TOWNS.	Population, ¹ Esti- mated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM—					
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	617,082	250	72	87	39	33	4	—	3
Worcester,	134,341	47	14	17	10	3	—	2	1
Fall River,	106,305	55	26	26	18	1	1	—	—
Cambridge,	100,922	22	6	9	4	2	1	—	—
Lowell,	96,380	34	14	17	15	—	1	—	—
Lynn,	82,661	35	5	7	—	5	1	1	—
New Bedford,	82,580	35	10	10	7	2	—	—	—
Springfield,	81,425	17	4	7	3	3	—	—	—
Lawrence,	78,000	31	12	16	7	5	—	—	—
Somerville,	74,295	14	6	2	—	—	1	—	—
Brockton,	53,131	14	4	4	3	1	—	—	—
Holyoke,	52,652	14	7	4	3	1	—	—	—
Malden,	40,929	5	1	—	—	—	—	—	—
Chelsea,	39,363	13	3	4	3	1	—	—	—
Newton,	38,919	9	5	2	—	—	—	—	—
Salem,	38,666	13	3	—	—	—	—	—	—
Haverhill,	38,228	13	3	8	5	1	—	1	1
Fitchburg,	33,948	9	5	4	1	1	1	—	—
Everett,	32,415	16	5	2	—	1	1	—	—
Taunton,	30,967	19	2	7	2	2	—	—	1
Quincy,	30,924	8	2	2	—	2	—	—	—
Waltham,	28,120	11	2	2	2	—	—	—	—
Pittsfield,	27,168	7	—	2	1	1	—	—	—
Gloucester,	26,011	3	1	—	—	—	—	—	—
Brookline,	25,825	5	—	2	2	—	—	—	—
North Adams,	22,150	7	3	2	1	—	—	—	—
Chicopee,	20,831	4	2	2	2	—	—	—	—
Northampton,	20,789	7	2	2	2	—	—	—	—
Medford,	20,605	6	1	4	—	3	—	—	1
Beverly,	16,088	4	—	1	1	—	—	—	—
Leominster,	15,578	4	2	2	1	—	—	—	—
Hyde Park,	15,327	5	3	1	—	—	—	—	1
Melrose,	15,160	5	2	1	—	1	—	—	—
Newburyport,	14,794	—	—	—	—	—	—	—	—
Woburn,	14,492	3	—	2	1	1	—	—	—
Westfield,	14,457	8	4	4	1	2	—	—	—
Marlborough,	14,359	5	1	1	1	—	—	—	—
Revere,	14,248	2	—	1	1	—	—	—	—
Attleborough,	13,600	6	1	3	2	1	—	—	—
Peabody,	14,144	—	—	—	—	—	—	—	—
Adams,	13,375	2	—	2	—	2	—	—	—
Clinton,	13,105	3	1	1	1	—	—	—	—
Gardner,	12,794	3	2	1	1	—	—	—	—
Milford,	12,565	—	—	—	—	—	—	—	—
Watertown,	12,306	6	2	2	1	1	—	—	—
Plymouth,	12,149	—	—	—	—	—	—	—	—
Weymouth,	11,744	5	2	1	1	—	—	—	—
Framingham,	11,698	4	—	—	—	—	—	—	—
Southbridge,	11,630	4	1	—	—	—	—	—	—
Wakefield,	10,903	—	—	—	—	—	—	—	—
Webster,	10,825	—	—	—	—	—	—	—	—
Arlington,	10,307	4	—	2	—	—	—	—	—

Recapitulation.

Total of reporting towns, .	2,305,900	796	241	276	142	76	11	4	8
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¹ The populations were estimated upon the rate of growth from 1900 to 1905. Those of Taunton, Gloucester, North Adams and Clinton were allowed to stand as in 1905, having shown no increase during the five-year period. The gain in the population of Lowell is due to the annexation of a part of the town of Tewksbury. The population of Lawrence by the census of 1905 was 70,050, but, owing to the building of the new Wood and Arlington mills, employing at present some 3,000 operatives, an increase of about 8,000 is estimated by the Lawrence board of health, or 78,000.

WEEK ENDING APRIL 11, 1908.

CITIES AND TOWNS.	Population. mated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —						
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.	
Boston,	617,082	219	66	76	36	26	2	1	2	
Worcester,	134,341	51	17	14	7	2	1	—	1	
Fall River,	106,305	40	19	12	2	4	1	1	—	
Cambridge,	100,922	23	3	6	2	3	1	—	—	
Lowell,	96,380	53	19	15	8	5	1	—	—	
Lynn,	82,661	22	5	7	—	4	2	—	—	
New Bedford,	82,580	41	17	15	8	6	—	—	—	
Springfield,	81,425	21	6	7	4	2	—	—	—	
Lawrence,	78,000	18	4	8	4	3	—	—	—	
Somerville,	74,295	13	3	6	3	1	1	1	—	
Brockton,	53,131	13	6	3	2	—	—	—	—	
Holyoke,	52,652	6	3	2	1	1	—	—	—	
Malden,	40,929	8	5	—	—	—	—	—	—	
Chelsea,	39,363	14	5	3	—	1	1	—	1	
Newton,	38,919	6	1	2	—	—	1	—	—	
Salem,	38,666	20	6	4	2	1	—	—	1	
Haverhill,	38,228	11	3	2	1	1	—	—	—	
Fitchburg,	33,948	10	3	3	2	1	—	—	—	
Everett,	32,415	10	3	2	—	—	1	—	1	
Taunton,	30,967	10	4	2	2	—	—	—	—	
Quincy,	30,924	7	2	—	—	—	—	—	—	
Waltham,	28,120	7	—	1	—	1	—	—	—	
Pittsfield,	27,168	13	1	3	2	1	—	—	—	
Gloucester,	26,011	5	1	—	—	—	—	—	—	
Brookline,	25,825	10	2	—	—	—	—	—	—	
North Adams,	22,150	3	2	2	2	—	—	—	—	
Chicopee,	20,831	8	4	3	2	—	—	—	—	
Northampton,	20,789	8	1	1	—	1	—	—	—	
Medford,	20,605	5	2	1	1	—	—	—	—	
Beverly,	16,088	4	—	—	—	—	—	—	—	
Leominster,	15,578	1	—	1	1	—	—	—	—	
Hyde Park,	15,327	2	—	1	1	—	—	—	—	
Melrose,	15,160	0	—	—	—	—	—	—	—	
Newburyport,	14,794	—	—	—	—	—	—	—	—	
Woburn,	14,492	7	1	2	—	1	1	—	—	
Westfield,	14,457	3	1	—	—	—	—	—	—	
Marlborough,	14,359	9	1	—	—	—	—	—	—	
Revere,	14,248	7	4	2	1	—	1	—	—	
Attleborough,	13,600	3	1	—	—	—	—	—	—	
Peabody,	14,144	—	—	—	—	—	—	—	—	
Adams,	13,375	2	1	2	1	—	—	—	—	
Clinton,	13,105	4	1	1	—	1	—	—	—	
Gardner,	12,794	6	4	2	2	—	—	—	—	
Milford,	12,565	5	1	—	—	—	—	—	—	
Watertown,	12,306	1	—	—	—	—	—	—	—	
Plymouth,	12,149	—	—	—	—	—	—	—	—	
Weymouth,	11,744	3	1	—	—	—	—	—	—	
Framingham,	11,698	6	1	—	—	—	—	—	—	
Southbridge,	11,630	3	2	2	2	—	—	—	—	
Wakefield,	10,903	—	—	—	—	—	—	—	—	
Webster,	10,825	—	—	—	—	—	—	—	—	
Arlington,	10,307	1	—	—	—	—	—	—	—	

Recapitulation.

Total of reporting towns,	2,318,465	742	230	213	99	66	14	3	6
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WEEK ENDING APRIL 18, 1908.

CITIES AND TOWNS.	Population. Esti- mated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM—						
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.	
Boston,	617,082	241	64	99	39	25	4	18	2	
Worcester,	134,341	47	17	13	5	2	-	-	1	
Fall River,	106,305	46	28	18	8	5	2	-	1	
Cambridge,	100,922	36	9	13	4	7	-	-	1	
Lowell,	96,380	42	15	16	8	5	-	1	-	
Lynn,	82,661	28	6	4	-	1	-	1	-	
New Bedford,	82,580	41	14	9	6	3	-	-	-	
Springfield,	81,425	35	5	11	6	3	-	-	-	
Lawrence,	78,000	30	9	17	11	2	-	1	-	
Somerville,	74,295	15	3	3	2	-	-	-	-	
Brockton,	53,131	15	6	7	5	2	-	-	-	
Holyoke,	52,652	15	7	3	3	-	-	-	-	
Malden,	40,929	15	4	3	1	2	-	-	-	
Chelsea,	39,363	20	3	4	-	2	-	-	2	
Newton,	38,919	8	3	1	-	1	-	-	-	
Salem,	38,666	12	4	6	6	-	-	-	-	
Haverhill,	38,228	16	2	3	1	1	-	-	-	
Fitchburg,	33,948	6	2	3	2	-	-	-	-	
Everett,	32,415	4	-	4	-	2	-	1	1	
Taunton,	30,967	12	5	6	2	1	-	-	1	
Quincy,	30,924	7	2	-	-	-	-	-	-	
Waltham,	28,120	8	1	2	1	1	-	-	-	
Pittsfield,	27,168	9	2	1	-	1	-	-	-	
Gloucester,	26,011	2	-	1	-	1	-	-	-	
Brookline,	25,825	4	1	1	1	-	-	-	-	
North Adams,	22,150	3	1	-	-	-	-	-	-	
Chicopee,	20,831	11	6	3	1	1	1	-	-	
Northampton,	20,789	9	1	2	1	1	-	-	-	
Medford,	20,605	3	1	-	-	-	-	-	-	
Beverly,	16,088	3	1	2	1	1	-	-	-	
Leominster,	15,578	2	1	1	1	-	-	-	-	
Hyde Park,	15,327	5	2	2	1	-	-	-	1	
Melrose,	15,160	7	0	2	1	1	-	-	-	
Newburyport,	14,794	-	-	-	-	-	-	-	-	
Woburn,	14,492	1	1	-	-	-	-	-	-	
Westfield,	14,457	6	1	-	-	-	-	-	-	
Marlborough,	14,359	5	0	2	1	1	-	-	-	
Revere,	14,248	4	2	1	1	-	-	-	-	
Attleborough,	13,600	1	0	-	-	-	-	-	-	
Peabody,	14,144	-	-	-	-	-	-	-	-	
Adams,	13,375	3	2	1	1	-	-	-	-	
Clinton,	13,105	3	0	1	-	1	-	-	-	
Gardner,	12,794	7	4	3	1	2	-	-	-	
Milford,	12,565	3	-	1	1	-	-	-	-	
Watertown,	12,306	4	0	-	-	-	-	-	-	
Plymouth,	12,149	-	-	-	-	-	-	-	-	
Weymouth,	11,744	4	0	1	1	-	-	-	-	
Framingham,	11,698	4	-	1	-	1	-	-	-	
Southbridge,	11,630	5	4	1	1	-	-	-	-	
Wakefield,	10,903	-	-	-	-	-	-	-	-	
Webster,	10,825	-	-	-	-	-	-	-	-	
Arlington,	10,307	1	-	-	-	-	-	-	-	

Recapitulation.

Total of reporting towns, .	2,266,443	808	239	272	124	76	7	22	10
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WEEK ENDING APRIL 25, 1908.

CITIES AND TOWNS.	Population. Esti- mated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —						
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.	
Boston,	617,082	245	75	80	38	14	5	13	3	1
Worcester,	134,341	37	15	9	7	1	—	—	—	—
Fall River,	106,305	40	21	16	10	4	—	—	—	—
Cambridge,	100,922	33	9	8	6	2	—	—	—	—
Lowell,	96,380	31	15	12	6	3	1	—	—	—
Lynn,	82,661	29	11	3	—	2	—	—	—	—
New Bedford,	82,580	39	20	15	10	2	2	—	—	—
Springfield,	81,425	24	3	7	4	2	—	1	—	—
Lawrence,	78,000	26	11	10	3	3	—	—	—	—
Somerville,	74,295	17	6	9	5	3	1	—	—	—
Brockton,	53,131	11	2	2	1	—	—	—	—	—
Holyoke,	52,652	18	7	6	5	—	—	—	—	—
Malden,	40,929	13	2	6	2	2	—	—	—	—
Chelsea,	39,363	12	3	1	—	1	—	—	—	—
Newton,	38,919	12	2	4	1	2	—	1	—	—
Salem,	38,666	15	5	4	2	1	—	—	1	—
Haverhill,	38,228	8	2	3	1	1	—	1	—	—
Fitchburg,	33,948	8	3	5	2	3	—	—	—	—
Everett,	32,415	8	—	—	—	—	—	—	—	—
Taunton,	30,967	11	6	2	—	—	—	—	—	—
Quincy,	30,924	7	0	1	—	—	1	—	—	—
Waltham,	28,120	12	1	1	—	1	—	—	—	—
Pittsfield,	27,168	11	1	3	2	—	—	—	—	—
Gloucester,	26,011	7	1	2	—	2	—	—	—	—
Brookline,	25,825	6	—	2	2	—	—	—	—	—
North Adams,	22,150	12	2	—	—	—	—	—	—	—
Chicopee,	20,831	9	4	2	4	2	—	—	—	—
Northampton,	20,789	9	2	1	—	—	—	—	1	—
Medford,	20,605	10	3	3	1	—	—	—	2	—
Beverly,	16,088	4	—	1	—	—	—	1	—	—
Leominster,	15,578	4	—	—	—	—	—	—	—	—
Hyde Park,	15,327	4	3	1	—	1	—	—	—	—
Melrose,	15,160	6	0	—	—	—	—	—	—	—
Newburyport,	14,794	—	—	—	—	—	—	—	—	—
Woburn,	14,492	2	—	1	—	1	—	—	—	—
Westfield,	14,457	4	1	2	—	1	—	—	—	—
Marlborough,	14,359	2	1	—	—	—	—	—	—	—
Revere,	14,248	2	—	1	—	—	—	—	—	—
Attleborough,	13,600	1	1	—	1	—	—	—	—	—
Peabody,	14,144	—	—	—	—	—	—	—	—	—
Adams,	13,375	3	3	—	—	—	—	—	—	—
Clinton,	13,105	1	0	—	—	—	—	—	—	—
Gardner,	12,794	2	1	—	—	—	—	—	—	—
Milford,	12,565	4	1	3	3	—	—	—	—	—
Watertown,	12,306	2	1	—	—	—	—	—	—	—
Plymouth,	12,149	—	—	—	—	—	—	—	—	—
Weymouth,	11,744	9	0	4	2	1	—	1	—	—
Framingham,	11,698	4	1	1	1	—	—	—	—	—
Southbridge,	11,630	—	—	—	—	—	—	—	—	—
Wakefield,	10,903	—	—	—	—	—	—	—	—	—
Webster,	10,825	—	—	—	—	—	—	—	—	—
Arlington,	10,307	4	1	—	—	—	—	—	—	—

Recapitulation.

Total of reporting towns, .	2,306,835	778	246	221	228	55	10	18	10
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WEEKLY RETURNS OF DEATHS FROM CERTAIN INFECTIOUS DISEASES.

DEATHS FROM INFECTIOUS DISEASES NOT SPECIFICALLY MENTIONED IN ABOVE TABLES DURING THE WEEKS OF APRIL 4, 11, 18 AND 25, 1908.

DISEASE.	Place.	WEEK ENDING—			
		Apr. 4.	Apr. 11.	Apr. 18.	Apr. 25.
Cerebro-spinal meningitis,	Adams, . . .	—	1	—	—
	Boston, . . .	—	1	—	1
	Brockton, . . .	—	1	—	—
	Haverhill, . . .	—	—	1	—
	Leominster, . . .	1	—	—	—
	Lowell, . . .	—	1	1	—
	Newton, . . .	2	1	—	—
	North Adams, . . .	1	—	—	—
	Revere, . . .	—	—	—	1
	Somerville, . . .	—	—	1	—
	Worcester, . . .	1	1	2	—
Erysipelas,	Boston,	2	1	4	1
	Brockton,	—	—	—	1
	Pittsfield,	—	—	—	1
	Somerville,	1	—	—	—
	Taunton,	—	—	1	—
	Worcester,	—	—	1	—
Whooping cough,	Boston,	2	1	—	3
	Fitchburg,	1	—	1	—
	Lawrence,	1	—	1	2
	Lynn,	—	—	—	1
	Taunton,	—	—	—	1
Scarlet fever,	Arlington,	2	—	—	—
	Boston,	2	2	4	—
	Cambridge,	—	—	1	—
	Fall River,	1	3	—	1
	Lynn,	—	1	—	—
	Malden,	—	2	—	2
	New Bedford,	—	—	—	1
	Springfield,	—	—	1	—
	Taunton,	2	—	—	1
	Westfield,	1	—	—	1
	Worcester,	—	2	2	—
Tubercular meningitis, . . .	Lynn,	—	—	1	—

WEEKLY RETURNS OF CASES OF INFECTIOUS DISEASES.

CASES OF INFECTIOUS DISEASES REPORTED DURING THE WEEKS OF APRIL
4, 11, 18 and 25, 1908.

[Under the provisions of section 52 of chapter 75 of the Revised Laws.]

	WEEK ENDING —			
	Apr. 4.	Apr. 11.	Apr. 18.	Apr. 25.
Diphtheria,	161	131	123	126
Measles,	886	924	868	882
Scarlet fever,	178	214	178	192
Typhoid fever,	28	320	245	140
Phthisis,	150	122	97	100
Cerebro-spinal meningitis,	7	7	4	7
Whooping cough,	11	20	16	16
Varicella,	14	37	20	16
Tetanus,	—	—	1	—
Ophthalmia neonatorum,	—	2	—	—
Mumps,	—	1	—	—
Scabies,	—	—	1	—

MONTHLY REPORT ON INSPECTION OF FOOD AND DRUGS.

The following summary presents the results of the examination of food and drugs made by the State Board of Health during the month of April, 1908:—

ARTICLES EXAMINED.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.	ARTICLES EXAMINED.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.
Baking powder,	2	—	2	Meat products:—			
Butter,	5	—	5	Beef tongue,	3	—	3
Canned fruit and vegetables,	5	—	5	Head cheese,	1	—	1
Cheese,	1	—	1	Hamburg steak,	7	1	8
Cider,	5	2	7	Jellied meats,	2	—	2
Cocoa,	3	—	3	Lambs tongues,	2	—	2
Coffee and coffee extracts,	1	3	4	Pressed meats,	2	—	2
Confectionery,	1	—	1	Sausages,	6	—	6
Condensed milk,	3	1	4	Tripe,	1	—	1
Drugs,	112	38	150	Milk,	336	35	371
Extract of vanilla,	3	—	3	Pickles,	3	—	3
Grape juice,	3	1	4	Salad dressing,	3	—	3
Jams and jellies,	4	—	4	Spices,	12	—	12
Malt liquor (porter),	2	—	2	Table sauce,	7	—	7
Maple sugar,	7	1	8	Vinegar,	8	3	11
Maple syrup,	5	—	5	Total,	555	85	640

The samples of drugs found to be adulterated were: alcohol, gin, hamamelis, rum, spirits of camphor, tincture of iodine, whiskey and several proprietary medicines.

The cities and towns in which samples were collected were: Adams, Arlington, Attleborough, Beverly, Boston, Brockton, Cambridge, Chelsea, Clinton, Danvers, Dedham, Easthampton, Everett, Framingham, Hyde Park, Holyoke, Ipswich, Lawrence, Lynn, Malden, Marlborough, Melrose, Milton, Milford, Newburyport, North Adams, Norton, Northampton, Rehoboth, Salem, Somerville, Springfield, Stoneham, Stoughton, Taunton, Ware, Williamstown, Winthrop, Woburn and Worcester.

PROSECUTIONS FOR VIOLATIONS OF THE LAW RELATING TO FOOD AND DRUGS.

Thirty-six convictions were secured during the month of April, 1908, for selling adulterated food and drugs and preparations containing cocaine, as follows:—

No.	Name of Defendant.	Place.	Character of Article sold.
1	Chas. W. Brackett,	Lynn,	Alcohol; 81.32 per cent.
2	John B. Collins,	Lynn,	Alcohol; 71.98 per cent.
3	James Dempsey,	Lynn,	Alcohol; 50.01 per cent.
4	James H. Griffin,	Boston,	Alcohol; 86.74 per cent.
5	Edward Heffernan,	Lynn,	Alcohol; 73.61 per cent.
6	David Henry,	Boston,	Alcohol; 75.16 per cent.
7	Wm. J. Higgins,	South Boston,	Alcohol; 83.46 per cent.
8	Richard J. Kane,	Lynn,	Alcohol; 77.85 per cent.
9	David J. Keliber,	Lynn,	Alcohol; 79.86 per cent.
10	Joseph J. Kelley,	South Boston,	Alcohol; 84.80 per cent.
11	John McMahon,	Lynn,	Alcohol; 73.15 per cent.
12	James Nicholson,	Lynn,	Alcohol; 55.04 per cent.
13	Loren M. Rollins,	Lynn,	Alcohol; 80.92 per cent.
14	Philip W. Ward,	Lynn,	Alcohol; 69.42 per cent.
15	Charles Celtin,	Newburyport,	Cider, preserved with benzoic acid.
16	Sylvester Santospirits,	Dorchester,	Cider, preserved with benzoic acid.
17	Cornelius Callahan,	Boston,	Cocaine catarrh powder ("Standard").
18	Edward Driscoll,	Boston,	Cocaine catarrh powder ("Standard").
19	Edward Driscoll,	Boston,	Cocaine catarrh powder ("Standard").
20	Edward Driscoll,	Boston,	Cocaine catarrh powder ("Standard").
21	William Hennessy,	Boston,	Cocaine catarrh powder ("Standard").
22	Samuel Molin,	Chelsea,	Cocaine catarrh powder ("Standard").
23	Samuel Molin,	Chelsea,	Cocaine catarrh powder ("Standard").

No.	Name of Defendant.	Place.	Character of Article sold.
24	Samuel Molin,	Chelsea,	Cocaine catarrh powder ("Standard").
25	James Malloy,	Boston,	Cocaine catarrh powder ("Standard").
26	James Malloy,	Boston,	Cocaine catarrh powder ("Standard").
27	Israel Kosofski,	Boston,	Hamburg steak.
28	George W. Milliken,	Boston,	Hamburg steak.
29	Christos Tykos,	Boston,	Maple sugar.
30	Stephen Costa,	Boston,	Maple sugar.
31	James Noyes,	Newburyport,	Milk (total solids, 10.69).
32	Addison M. Robinson,	Lawrence,	Milk (total solids, 9.86).
33	Addison M. Robinson,	Lawrence,	Milk (watered).
34	William Smith,	Beverly,	Oleomargarine.
35	Michael H. Ajamian,	Boston,	Olive oil.
36	Herbert G. Dunmore,	Boston,	Pickles.

Fines imposed, \$1,260.

LIST OF ADULTERATED OR IMPROPERLY LABELLED FOODS, ETC., FOR APRIL, 1908.

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
q-328	Unfermented grape juice, "Free from chemical preservation."	Adolph Prince, New York,	Preserved with salicylic acid.
7539	Coffee extract,	Sage Bros., 8 Portland Street, Boston,	Preserved with benzoic acid.
7546	Sterry's cocoa,	Sterry & Sterry, New York,	Largely cocoa shells.
7256	Carbonated sweet cider,	Coleman & Keating, Boston,	Carbonated cane sugar solution, containing about 5 per cent. cider.
1173 P	Chelmsford Spring champagne cider.	-	Largely carbonated cane sugar solution.
7240 M	Milk,	Charles H. Freeman, Norton,	Total solids, 10.96 per cent.; contained added water.
7248 M	Milk,	Joseph Guimond, Attleborough,	Total solids, 11.17 per cent.; contained added water.
7412 M	Milk,	John J. Welch, Rehoboth,	Total solids, 11.17 per cent.; contained added water.
7414 M	Milk,		Total solids, 11.24 per cent.; contained added water.
7416 M	Milk,		Total solids, 11.46 per cent.; contained added water.
7418 M	Milk,		Total solids, 10.94 per cent.; contained added water.
7420 M	Milk,	Cosmo Saleno, Dedham,	Total solids, 11.34 per cent.; contained added water.
7422 M	Milk,		Total solids, 10.50 per cent.; contained added water.
q-346	Dr. Gilbert's Peruvian Tonic.	Gilbert Medicine Company, Boston,	Total solids, 10.00 per cent.; contained added water.
6690 M		-	20.52 per cent. alcohol.
6642 M	Craig's Cough and Consumption Cure.	-	19.28 per cent. alcohol.
1529 P	Burgundia Coca,	Burgundia Coca Company, New York, London, Mexico,	15.49 per cent. alcohol; contained cocaine.

INSPECTION OF DAIRIES.

During the month of April, 1908, 153 dairies supplying milk for public sale in Massachusetts were examined, of which 17 are situated in Vermont. The Massachusetts dairies yielded the following data:—

PLACE.	Number examined.	Number found to present No Objectionable Features.	Per Cent.	Number to which Letters were sent.	Per Cent.
Adams,	2	—	—	2	100.00
Ashby,	1	—	—	1	100.00
Berlin,	1	—	—	1	100.00
Second inspection,	2	—	—	2	100.00
Beverly,	3	3	100.00	—	—
Second inspection,	1	1	100.00	—	—
Clarksburg,	17	13	76.47	4	23.53
Conway,	48	14	29.17	34	70.83
Framingham,	1	—	—	1	100.00
Hingham,	1	—	—	1	100.00
Manchester,	—	—	—	—	—
Second inspection,	5	5	100.00	—	—
Marlborough,	2	2	100.00	—	—
Second inspection,	1	—	—	1	100.00
Norfolk,	2	1	50.00	1	50.00
North Adams,	28	12	42.86	16	57.14
Southborough,	—	—	—	—	—
Third and fourth inspections,	2	—	—	2	100.00
Sterling,	—	—	—	—	—
Second inspection,	3	3	100.00	—	—
Wenham,	—	—	—	—	—
Second inspection,	4	3	75.00	1	25.00
Williamstown,	11	7	63.64	4	36.36
Winchendon,	—	—	—	—	—
Second inspection,	1	—	—	1	100.00

Total number of dairies examined (including those in Vermont),	153
Number found to be free from objectionable conditions,	75
Number to which letters were sent,	78
Total number of conditions to which attention was called,	253
Percentage of dairies which passed inspection,	49.02

The names of the owners of dairies found to be worthy of commendation follow:—

*Beverly.*Chamberlain, Dr. M. L.¹

Naylor, Felix

Prest, John C.

Thompson, Thomas F.

Clarksburg.

Alderman, Dallus A.

Bishop, Dexter

Bishop, F. E.

Chappel C. H.

Fuller, William E.

Gleason, E. W.

Jourdan, N.

Marlow, N.

Oaks L. M.

Shultis, N. R.

Trask, Allan

Westcott, L. S.

Wood, Elmer D.

¹ Second inspection.

Conway.

Allis, George D.
 Boyden Bros.
 Clary, Samuel
 De Wolf, C. F.
 Elmer C. F.

Hamilton, G. Fred
 Harris, W. F.
 Howland, Francis
 Newhall, Harry T.
 Newhall, Joseph

Parker, J. F.
 Pease, H. D.
 Seffons, Daniel
 Stearns, Henry

Manchester.

Baker, R. & L. ¹
 Kimball, D. R. ¹

Lucas, A. J. ¹
 Manchester Town Farm ¹

Silver, M. ¹

Marlborough.

Browne, Marcus

Fay, Walter N.

Norfolk.

Cook, T. D. & Co.

North Adams.

Bissallon, J.
 Briggs, Richard
 Brissett, Stephen
 Clairmont, Moses

Comstock, Henry
 Crews, Harry
 Daniels, H. E.
 Guilfus, Horace

Hosley, S. S.
 Oldman, Peter
 Paul, Willis G.
 Scully, Thomas H.

Sterling.

Bacon, Henry ¹

Carter, F. E. ¹

Herrman, Charles ¹

Wenham.

Dodge, John K. ¹

Preston, D. W. ¹

Prince, S. R. & Co. ¹

Williamstown.

Babcock, A. W.
 Galusha, David
 Hickox, Henry

Hickox, S. A.
 Lamb, John

Prindle, George H.
 Thompson, Daniel

Vermont Dairies.

PLACE.	Number examined.	Number found to present No Objectionable Features.	Per Cent.	Number to which Letters were sent.	Per Cent.
Stamford,	17	11	64.71	6	35.29

¹ Second inspection.

PROPRIETARY PREPARATIONS ADVERTISED AS UN-
SALABLE DURING APRIL, 1908.

Mrs. Winslow's Soothing Syrup. The Anglo-American Drug Company, 215-217 Fulton Street, New York City.¹

Kopp's "Baby's Friend:" The King of Baby Soothers. Mrs. J. A. Kopp, Sole Proprietor; C. Robert Kopp, Manufacturing Chemist, York, Penn.¹

Burgundia Coca. The Burgundia-Coca Company. New York, London, Mexico. J. Morningstar, Sole Agent for the United States and Canada, 48 Park Place, New York.²

Cocaine-containing powder, unlabelled.

Cocaine-containing catarrh snuff, unlabelled.

¹ Contained morphine in excess of the amount stated on the label. ² Contained cocaine.

MONTHLY BULLETIN

OF THE

STATE BOARD OF HEALTH

OF

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STATE BOARD OF HEALTH.

HENRY P. WALCOTT, M.D., CAMBRIDGE, *Chairman.*

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BOSTON

WRIGHT & POTTER PRINTING CO., STATE PRINTERS

18 POST OFFICE SQUARE

1908

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WEEKLY RETURNS OF DEATHS FROM CITIES AND TOWNS OF MORE THAN 10,000 POPULATION.

WEEK ENDING MAY 2, 1908.

CITIES AND TOWNS.	Population, ¹ Estimated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —						
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.	
Boston,	617,082	286	93	124	50	31	2	22	5	
Worcester,	134,341	36	7	18	9	6	1	—	—	
Fall River,	106,305	52	25	12	3	4	1	—	—	
Cambridge,	100,922	27	7	8	4	3	—	1	—	
Lowell,	96,380	40	13	10	6	2	1	—	—	
Lynn,	82,661	22	6	6	1	4	—	1	—	
New Bedford,	82,580	23	8	5	3	2	—	—	—	
Springfield,	81,425	18	2	3	2	1	—	—	—	
Lawrence,	78,000	27	12	11	3	2	—	2	—	
Somerville,	74,295	20	4	10	4	6	—	—	—	
Brockton,	53,131	10	2	4	—	2	—	—	—	
Holyoke,	52,652	14	5	6	3	2	1	—	—	
Malden,	40,929	10	1	1	1	—	—	—	—	
Chelsea,	39,363	14	2	2	—	2	—	—	—	
Newton,	38,919	14	3	3	2	—	1	—	—	
Salem,	38,666	9	5	4	4	—	—	—	—	
Haverhill,	38,228	12	1	2	1	1	—	—	—	
Fitchburg,	33,948	4	1	—	—	—	—	—	—	
Everett,	32,415	9	4	2	—	1	1	—	—	
Taunton,	30,967	15	6	7	4	—	—	—	—	
Quincy,	30,924	16	4	7	5	2	—	—	—	
Waltham,	28,120	8	—	1	1	—	—	—	—	
Pittsfield,	27,168	10	—	2	1	—	—	—	—	
Gloucester,	26,011	4	1	—	—	—	—	—	—	
Brookline,	25,825	12	1	2	2	—	—	—	—	
North Adams,	22,150	7	3	—	—	—	—	—	—	
Chicopee,	20,831	6	3	2	2	—	—	—	—	
Northampton,	20,789	6	2	1	1	—	—	—	—	
Medford,	20,605	4	1	3	1	2	—	—	—	
Beverly,	16,088	1	—	—	—	—	—	—	—	
Leominster,	15,578	4	1	1	1	—	—	—	—	
Hyde Park,	15,327	9	0	3	1	2	—	—	—	
Melrose,	15,160	3	1	1	—	1	—	—	—	
Newburyport,	14,794	—	—	—	—	—	—	—	—	
Woburn,	14,492	2	0	—	—	—	—	—	—	
Westfield,	14,457	10	5	1	1	—	—	—	—	
Marlborough,	14,359	5	2	—	—	—	—	—	—	
Revere,	14,248	6	3	—	—	—	—	—	—	
Attleborough,	13,600	4	0	1	—	1	—	—	—	
Peabody,	14,144	—	—	—	—	—	—	—	—	
Adams,	13,375	2	—	2	2	—	—	—	—	
Clinton,	13,105	5	2	—	—	—	—	—	—	
Gardner,	12,794	4	3	—	—	—	—	—	—	
Milford,	12,565	2	—	—	—	—	—	—	—	
Watertown,	12,306	3	0	2	2	—	—	—	—	
Plymouth,	12,149	—	—	—	—	—	—	—	—	
Weymouth,	11,744	2	0	—	—	—	—	—	—	
Framingham,	11,698	2	1	—	—	—	—	—	—	
Southbridge,	11,630	7	2	1	1	—	—	—	—	
Wakefield,	10,903	—	—	—	—	—	—	—	—	
Webster,	10,825	—	—	—	—	—	—	—	—	
Arlington,	10,307	3	1	—	—	—	—	—	—	

Recapitulation.

Total of reporting towns,	2,318,465	809	243	268	121	77	8	26	5
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¹ The populations were estimated upon the rate of growth from 1900 to 1905. Those of Taunton, Gloucester, North Adams and Clinton were allowed to stand as in 1905, having shown no increase during the five-year period. The gain in the population of Lowell is due to the annexation of a part of the town of Tewksbury. The population of Lawrence by the census of 1905 was 70,050, but, owing to the building of the new Wood and Arlington mills, employing at present some 3,000 operatives, an increase of about 8,000 is estimated by the Lawrence board of health, or 78,000.

WEEK ENDING MAY 9, 1908.

CITIES AND TOWNS.	Population. Estimated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM—						
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.	
Boston,	617,082	232	68	77	32	16	3	12	7	
Worcester,	134,341	45	9	16	3	8	1	-	1	
Fall River,	106,305	40	18	16	10	2	-	-	-	
Cambridge,	100,922	23	8	8	5	2	1	-	-	
Lowell,	96,380	36	18	10	7	2	-	-	1	
Lynn,	82,661	22	3	7	-	4	1	-	-	
New Bedford,	82,580	22	9	8	5	3	-	-	-	
Springfield,	81,425	20	3	3	1	1	1	-	-	
Lawrence,	78,000	28	13	11	4	4	-	1	-	
Somerville,	74,295	16	3	8	5	-	-	2	-	
Brockton,	53,131	13	4	1	1	-	-	-	-	
Holyoke,	52,652	20	9	3	1	1	-	-	-	
Malden,	40,929	9	4	3	1	1	-	-	-	
Chelsea,	39,363	10	3	3	-	1	-	-	1	
Newton,	38,919	10	1	2	2	-	-	-	-	
Salem,	38,666	22	11	12	11	-	-	-	1	
Haverhill,	38,228	14	1	6	6	-	-	-	-	
Fitchburg,	33,948	12	5	1	-	1	-	-	-	
Everett,	32,415	8	2	1	-	1	-	-	-	
Taunton,	30,967	12	3	3	2	-	-	-	-	
Quincy,	30,924	7	1	-	-	-	-	-	-	
Waltham,	28,120	6	1	1	1	-	-	-	-	
Pittsfield,	27,168	9	0	2	2	-	-	-	-	
Gloucester,	26,011	4	2	-	-	-	-	-	-	
Brookline,	25,825	1	-	-	-	-	-	-	-	
North Adams,	22,150	7	-	2	1	1	-	-	-	
Chicopee,	20,831	4	2	3	2	-	-	-	-	
Northampton,	20,789	8	1	1	-	-	1	-	-	
Medford,	20,605	5	3	-	-	-	-	-	-	
Beverly,	16,088	3	1	1	1	-	-	-	-	
Leominster,	15,578	5	3	1	1	-	-	-	-	
Hyde Park,	15,327	2	0	-	-	-	-	-	-	
Melrose,	15,160	2	2	2	1	-	-	-	-	
Newburyport,	14,794	-	-	-	-	-	-	-	-	
Woburn,	14,492	7	2	1	-	1	-	-	-	
Westfield,	14,457	4	2	-	-	-	-	-	-	
Marlborough,	14,359	2	0	-	-	-	-	-	-	
Revere,	14,248	4	2	2	2	-	-	-	-	
Attleborough,	13,600	2	0	-	-	-	-	-	-	
Peabody,	14,144	-	-	-	-	-	-	-	-	
Adams,	13,375	7	4	1	-	-	-	-	-	
Clinton,	13,105	3	1	-	-	-	-	-	-	
Gardner,	12,794	4	2	1	-	1	-	-	-	
Milford,	12,565	2	-	1	-	-	-	-	1	
Watertown,	12,306	4	0	-	-	-	-	-	-	
Plymouth,	12,149	-	-	-	-	-	-	-	-	
Weymouth,	11,744	3	0	1	1	-	-	-	-	
Framingham,	11,698	2	1	1	1	-	-	-	-	
Southbridge,	11,630	-	-	-	-	-	-	-	-	
Wakefield,	10,903	-	-	-	-	-	-	-	-	
Webster,	10,825	-	-	-	-	-	-	-	-	
Arlington,	10,307	1	1	1	-	-	1	-	-	

Recapitulation.

Total of reporting towns, . . .	2,306,835	722	226	221	109	50	9	15	12
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WEEK ENDING MAY 16, 1908.

CITIES AND TOWNS.	Population. Esti- mated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	617,082	270	75	73	17	26	6	8	6
Worcester,	134,341	33	10	8	3	2	1	-	-
Fall River,	106,305	39	15	10	3	1	1	-	-
Cambridge,	100,922	25	4	5	2	1	1	1	-
Lowell,	96,380	30	7	5	-	4	-	-	-
Lynn,	82,661	26	5	3	-	2	-	1	-
New Bedford,	82,580	29	10	6	-	3	-	1	-
Springfield,	81,425	21	2	6	4	2	-	-	-
Lawrence,	78,000	15	3	6	1	5	-	-	-
Somerville,	74,295	19	5	6	4	1	-	-	-
Brockton,	53,131	14	3	5	1	3	-	1	-
Holyoke,	52,652	15	5	6	3	1	-	-	-
Malden,	40,929	13	2	2	2	-	-	-	-
Chelsea,	39,363	11	3	2	-	-	-	-	2
Newton,	38,919	11	3	1	1	-	-	-	-
Salem,	38,666	22	12	5	5	-	-	-	-
Haverhill,	38,228	9	2	2	1	1	-	-	-
Fitchburg,	33,948	11	3	4	3	1	-	-	-
Everett,	32,415	9	2	1	-	1	-	-	-
Taunton,	30,967	15	2	5	3	2	-	-	-
Quincy,	30,924	9	1	2	1	1	-	-	-
Waltham,	28,120	4	0	2	1	1	-	-	-
Pittsfield,	27,168	-	-	-	-	-	-	-	-
Gloucester,	26,011	5	3	-	-	-	-	-	-
Brookline,	25,825	10	1	-	-	-	-	-	-
North Adams,	22,150	8	3	2	-	2	-	-	-
Chicopee,	20,831	4	2	2	1	-	-	-	-
Northampton,	20,789	6	1	-	-	-	-	-	-
Medford,	20,605	4	-	2	-	2	-	-	-
Beverly,	16,088	4	-	2	2	-	-	-	-
Leominster,	15,578	4	2	1	1	-	-	-	-
Hyde Park,	15,327	3	1	2	-	1	-	-	1
Melrose,	15,160	2	0	1	-	1	-	-	-
Newburyport,	14,794	-	-	-	-	-	-	-	-
Woburn,	14,492	5	0	1	-	1	-	-	-
Westfield,	14,457	4	1	-	-	-	-	-	-
Marlborough,	14,359	5	0	1	-	1	-	-	-
Revere,	14,248	5	1	-	-	-	-	-	-
Attleborough,	13,600	4	0	1	-	1	-	-	-
Peabody,	14,144	-	-	-	-	-	-	-	-
Adams,	13,375	2	1	2	1	1	-	-	-
Clinton,	13,105	3	0	1	-	-	-	-	-
Gardner,	12,794	3	1	-	-	-	-	-	-
Milford,	12,565	2	-	1	-	-	-	-	1
Watertown,	12,306	1	0	-	-	-	-	-	-
Plymouth,	12,149	-	-	-	-	-	-	-	-
Weymouth,	11,744	0	-	-	-	-	-	-	-
Framingham,	11,698	3	-	-	-	-	-	-	-
Southbridge,	11,630	7	4	2	1	1	-	-	-
Wakefield,	10,903	-	-	-	-	-	-	-	-
Webster,	10,825	-	-	-	-	-	-	-	-
Arlington,	10,307	3	-	1	-	1	-	-	-

Recapitulation.

Total of reporting towns, .	2,291,297	747	195	187	61	70	9	12	10
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WEEK ENDING MAY 23, 1908.

CITIES AND TOWNS.	Population. Esti- mated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —						
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.	
Boston,	617,082	243	59	95	37	25	4	7	10	
Worcester,	134,341	46	10	16	9	3	-	-	2	
Fall River,	106,305	36	16	18	7	3	-	1	-	
Cambridge,	100,922	33	6	6	1	3	-	-	-	
Lowell,	96,380	30	11	8	5	1	-	1	-	
Lynn,	82,661	23	8	5	-	1	2	1	-	
New Bedford,	82,580	23	10	3	3	-	-	-	-	
Springfield,	81,425	24	-	1	1	-	-	-	-	
Lawrence,	78,000	22	9	6	1	5	-	-	-	
Somerville,	74,295	20	2	7	3	4	-	-	-	
Brockton,	53,131	8	1	1	-	-	-	-	-	
Holyoke,	52,652	17	7	6	3	1	1	-	-	
Malden,	40,929	15	2	2	-	2	-	-	-	
Chelsea,	39,363	5	2	-	-	-	-	-	-	
Newton,	38,919	6	5	2	-	2	-	-	-	
Salem,	38,666	23	11	5	2	1	-	-	1	
Haverhill,	38,228	3	-	-	-	-	-	-	-	
Fitchburg,	33,948	8	4	2	2	-	-	-	-	
Everett,	32,415	12	3	2	-	-	-	-	1	
Taunton,	30,967	13	0	3	2	1	-	-	-	
Quincy,	30,924	7	2	3	1	1	-	1	-	
Waltham,	28,120	5	-	2	-	2	-	-	-	
Pittsfield,	27,168	8	-	-	-	-	-	-	-	
Gloucester,	26,011	9	2	1	-	1	-	-	-	
Brookline,	25,825	6	1	-	-	-	-	-	-	
North Adams,	22,150	11	4	2	-	-	1	1	-	
Chicopee,	20,831	3	2	1	-	1	-	-	-	
Northampton,	20,789	4	-	1	-	1	-	-	-	
Medford,	20,605	4	-	1	-	1	-	-	-	
Beverly,	16,088	3	1	-	-	-	-	-	-	
Leominster,	15,578	2	-	-	-	-	-	-	-	
Hyde Park,	15,327	2	2	-	-	-	-	-	-	
Melrose,	15,160	3	1	1	-	1	-	-	-	
Newburyport,	14,794	-	-	-	-	-	-	-	-	
Woburn,	14,492	4	3	1	1	-	-	-	-	
Westfield,	14,457	3	-	-	-	-	-	-	-	
Marlborough,	14,359	3	0	2	-	1	-	-	-	
Revere,	14,248	4	-	1	-	1	-	-	-	
Attleborough,	13,600	1	0	-	-	-	-	-	-	
Peabody,	14,144	-	-	-	-	-	-	-	-	
Adams,	13,375	2	2	-	-	-	-	-	-	
Clinton,	13,105	5	1	-	-	-	-	-	-	
Gardner,	12,794	4	2	1	-	1	-	-	-	
Milford,	12,565	2	1	1	1	-	-	-	-	
Watertown,	12,306	2	1	1	-	-	-	-	-	
Plymouth,	12,149	-	-	-	-	-	-	-	-	
Weymouth,	11,744	2	-	-	-	-	-	-	-	
Framingham,	11,698	4	-	1	-	1	-	-	-	
Southbridge,	11,630	-	-	-	-	-	-	-	-	
Wakefield,	10,903	-	-	-	-	-	-	-	-	
Webster,	10,825	-	-	-	-	-	-	-	-	
Arlington,	10,307	0	-	-	-	-	-	-	-	

Recapitulation.

Total of reporting towns, .	2,306,835	713	191	208	79	64	8	12	14
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WEEK ENDING MAY 30, 1908.

CITIES AND TOWNS.	Population Estimated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	617,082	236	84	77	25	26	3	3	6
Worcester,	134,341	36	6	9	2	3	1	—	—
Fall River,	106,305	43	19	31	—	—	1	5	14
Cambridge,	100,922	24	7	9	3	1	—	—	—
Lowell,	96,380	21	6	3	1	1	—	—	—
Lynn,	82,661	28	10	2	—	1	—	—	—
New Bedford,	82,580	26	10	8	3	2	—	2	—
Springfield,	81,425	15	3	2	2	—	—	—	—
Lawrence,	78,000	21	6	3	1	2	—	—	—
Somerville,	74,295	19	6	6	4	—	1	—	—
Brockton,	53,131	12	4	1	—	1	—	—	—
Holyoke,	52,652	21	12	3	—	1	—	—	—
Malden,	40,929	11	2	1	—	—	—	1	—
Chelsea,	39,363	4	2	1	—	—	—	—	—
Newton,	38,919	7	—	2	—	2	—	—	—
Salem,	38,666	15	8	3	1	—	—	1	1
Haverhill,	38,228	14	2	4	1	3	—	—	—
Fitchburg,	33,948	7	1	—	—	—	—	—	—
Everett,	32,415	8	2	1	—	—	—	1	—
Taunton,	30,967	15	4	1	—	—	—	—	—
Quincy,	30,924	6	1	2	—	2	—	—	—
Waltham,	28,120	3	—	1	—	1	—	—	—
Pittsfield,	27,168	4	2	2	1	1	—	—	—
Gloucester,	26,011	—	—	—	—	—	—	—	—
Brookline,	25,825	8	1	2	1	1	—	—	—
North Adams,	22,150	4	—	1	—	—	—	—	—
Chicopee,	20,831	9	6	4	2	2	—	—	—
Northampton,	20,789	10	2	3	—	2	—	—	—
Medford,	20,605	4	1	1	1	—	—	—	—
Beverly,	16,088	6	—	1	—	—	—	1	—
Leominster,	15,578	—	—	—	—	—	—	—	—
Hyde Park,	15,327	2	—	—	—	—	—	—	—
Melrose,	15,160	7	1	5	3	—	—	—	—
Newburyport,	14,794	—	—	—	—	—	—	—	—
Woburn,	14,492	8	2	1	—	1	—	—	—
Westfield,	14,457	4	—	—	—	—	—	—	—
Marlborough,	14,359	5	2	—	—	—	—	—	—
Revere,	14,248	2	—	1	—	1	—	—	—
Attleborough,	13,600	3	1	1	—	1	—	—	—
Peabody,	14,144	—	—	—	—	—	—	—	—
Adams,	13,375	4	3	4	1	2	—	—	—
Clinton,	13,105	4	2	—	—	—	—	—	—
Gardner,	12,794	4	2	1	—	1	—	—	—
Milford,	12,565	—	—	—	—	—	—	—	—
Watertown,	12,306	1	0	—	—	—	—	—	—
Plymouth,	12,149	—	—	—	—	—	—	—	—
Weymouth,	11,744	—	—	—	—	—	—	—	—
Framingham,	11,698	2	—	—	—	—	—	—	—
Southbridge,	11,630	6	2	2	—	2	—	—	—
Wakefield,	10,903	—	—	—	—	—	—	—	—
Webster,	10,825	—	—	—	—	—	—	—	—
Arlington,	10,307	1	—	—	—	—	—	—	—

Recapitulation.

Total of reporting towns,	2,239,192	690	222	199	52	60	6	14	21
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WEEKLY RETURNS OF DEATHS FROM CERTAIN INFECTIOUS DISEASES.

DEATHS FROM INFECTIOUS DISEASES NOT SPECIFICALLY MENTIONED IN ABOVE TABLES DURING THE WEEKS OF MAY 2, 9, 16, 23 AND 30, 1908.

DISEASE.	Place.	WEEK ENDING —				
		May 2.	May 9.	May 16.	May 23.	May 30.
Cerebro-spinal meningitis, .	Adams, . .	—	1	—	—	—
	Boston, . .	—	—	2	—	2
	Brockton, . .	—	—	—	1	—
	Lawrence, . .	1	—	—	—	—
	Lowell, . .	1	—	1	—	1
	Lynn, . .	—	1	—	—	—
	Malden, . .	—	1	—	—	—
	New Bedford, . .	—	—	—	—	1
	Worcester, . .	—	2	—	—	1
Erysipelas,	Boston, . .	3	1	1	2	—
	Brockton, . .	1	—	—	—	—
	Cambridge, . .	—	—	—	1	—
	Holyoke, . .	—	—	1	—	—
	Melrose, . .	—	—	—	—	1
	Worcester, . .	—	—	—	—	1
Whooping cough,	Boston, . .	1	3	—	3	—
	Brockton, . .	1	—	—	—	—
	Cambridge, . .	—	—	—	1	2
	Chelsea, . .	—	1	—	—	—
	Fall River, . .	—	1	1	1	3
	Northampton, . .	—	—	—	—	1
	Lynn, . .	—	—	—	—	1
	Salem, . .	—	—	—	1	—
	Somerville, . .	—	—	—	—	1
Scarlet fever,	Adams, . .	—	—	—	—	1
	Boston, . .	6	1	4	2	4
	Chicopee, . .	—	1	1	—	1
	Clinton, . .	—	—	1	—	—
	Everett, . .	—	—	—	1	—
	Fall River, . .	—	1	1	1	8
	Lynn, . .	—	1	—	1	—
	Marlborough, . .	—	—	—	1	—
	Pittsfield, . .	1	—	—	—	—
	Somerville, . .	—	1	—	—	—
	Taunton, . .	1	—	—	—	—
	Worcester, . .	2	1	1	2	1

WEEKLY RETURNS OF CASES OF INFECTIOUS DISEASES.

CASES OF INFECTIOUS DISEASES REPORTED DURING THE WEEKS OF MAY
2, 9, 16, 23 AND 30, 1908.

[Under the provisions of section 52 of chapter 75 of the Revised Laws.]

	WEEK ENDING —				
	May 2.	May 9.	May 16.	May 23.	May 30.
Diphtheria,	135	201	163	162	125
Measles,	859	984	928	1,025	724
Scarlet fever,	183	187	184	174	152
Typhoid fever,	82	63	69	71	61
Tuberculosis, pulmonary,	164	140	117	125	105
Tuberculosis, other than pulmonary,	1	2	1	—	—
Cerebro-spinal meningitis,	7	—	2	1	3
Whooping cough,	5	17	13	19	20
Varicella,	9	13	25	16	23
Tetanus,	1	—	—	—	—
Ophthalmia neonatorum,	1	—	—	1	1
Mumps,	—	—	1	2	2
Scabies,	—	—	1	—	—
Smallpox,	—	—	—	—	2
Erysipelas,	—	1	—	1	—

MONTHLY REPORT ON INSPECTION OF FOOD AND DRUGS.

The following summary presents the results of the examination of food and drugs made by the State Board of Health during the month of May, 1908:—

ARTICLES EXAMINED.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.	ARTICLES EXAMINED.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.
Beer,	1	—	1	Maple syrup,	3	—	3
Butter,	6	—	6	Meat products:—			
Canned fruit and vegetables,	6	—	6	Canned meat,	1	—	1
Cider,	6	1	7	Hamburg steak,	1	1	2
Cocoa,	1	1	2	Mince meat,	1	—	1
Coffee and coffee extracts,	2	1	3	Sausages,	4	—	4
Confectionery,	1	—	1	Milk,	499	62	561
Condensed milk,	2	2	4	Non-alcoholic drinks,	4	—	4
Drugs,	63	17	80	Pickles,	8	1	9
Flavoring extracts,	11	1	12	Salad dressing,	3	—	3
Grape juice,	1	—	1	Spices,	2	—	2
Honey,	1	—	1	Table sauce,	3	1	4
Jams and jellies,	8	—	8	Vinegar,	6	2	8
Maple sugar,	6	3	9	Total,	650	93	743

The samples of drugs found to be adulterated were: alcohol, spirits of camphor, tincture of iodine, whiskey, and several proprietary medicines.

The cities and towns in which samples were collected were: Abington, Adams, Amesbury, Attleborough, Braintree, Boston, Brockton, Cambridge, Chelsea, Chelmsford, Framingham, Gloucester, Hingham, Hyde Park, Lawrence, Lowell, Lynn, Malden, Mansfield, Medford, Melrose, Middleborough, Newton, Newburyport, North Adams, Pittsfield, Reading, Revere, Salem, Spencer, Springfield, Somerville, Taunton, Topsfield, Wakefield, Wenham, Weymouth, Whitman, Winchester, Woburn and Worcester.

PROSECUTIONS FOR VIOLATIONS OF THE LAW RELATING TO FOOD AND DRUGS.

Twenty-seven convictions were secured during the month of May, 1908, for selling adulterated food and drugs and preparations containing cocaine, as follows:—

No.	Name of Defendant.	Place.	Character of Article sold.
1	Joseph P. Spang,	Boston,	Alcohol; 74.18 per cent.
2	John H. Lane,	Boston,	Alcohol; 64.49 per cent.
3	Thomas Quinn,	North Adams, . .	Alcohol; 55.51 per cent.
4	Joseph A. Rosi,	North Adams, . .	Alcohol; 58.10 per cent.
5	M. Frank Casey,	Pittsfield,	Celerina (contained cocaine).
6	Durgin McManus Co.,	Pittsfield,	Celerina (contained cocaine).
7	Edward F. Fahey,	Pittsfield,	Celerina (contained cocaine).
8	Arthur F. Lee,	North Adams, . .	Celerina (contained cocaine).
9	Joseph E. Triganne,	North Adams, . .	Celerina (contained cocaine).
10	Albert H. Cushman,	Bridgewater, . . .	Cider (contained salicylic acid).
11	Zebulon P. Cushman,	Bridgewater, . . .	Cider (contained salicylic acid).
12	Haynes Piper Co.,	Boston,	Cider (contained benzoic acid).
13	Joseph J. Healey,	Lynn,	Hamburg steak (contained sulphurous acid).
14	James Smith,	Lowell,	Hamburg steak (contained sulphurous acid).
15	Mathew T. Bennett,	Woburn,	Milk (total solids, 11.80).
16	N. Burns & Co.,	Saugus,	Milk (total solids, 11.22).
17	David S. Clarke,	Topsfield,	Milk (total solids, 11.20).
18	Seneca Cole,	Attleborough, . .	Milk (total solids, 11.03).
19	Chas. H. Freeman,	Attleborough, . .	Milk (total solids, 10.96).
20	Joseph S. French,	Medford,	Milk (total solids, 10.59).
21	Joseph Guimond,	Attleborough, . .	Milk (total solids, 11.17).
22	Alexander Mura,	Andover,	Milk (total solids, 8.92).
23	Fred. H. Peabody,	Lowell,	Milk (total solids, 11.48).
24	Adelard Poudrier,	Marlborough, . .	Milk (total solids, 10.80).
25	Joseph C. Reginer,	Lowell,	Milk (total solids, 11.50).
26	James E. Torrey,	Pittsfield,	Milk (total solids, 11.04).
27	John J. Welch,	Rehoboth,	Milk (total solids, 10.50).

Fines imposed, \$695.

LIST OF ADULTERATED OR IMPROPERLY LABELLED FOODS, ETC., FOR MAY, 1908.

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
7224	"Pride of the Farm" chili sauce.	E. Prichard, New York, N. Y.,	Preserved with benzoic acid.
2079 P	"Hull's Concentrated" extract of orange.	Geo. S. Hull & Co., Lowell, Mass.,	Orange oil, 2.8 per cent.
7734	Tincture of iodine,	Viger & Dubrule, Lawrence, Mass.,	55 per cent. of required strength.
7748	Spirit of camphor,	A. G. Trafton, Boston, Mass.,	75 per cent. of required strength.
7635	Robustine,	Con Keefe, Boston, Mass.,	26.31 per cent. alcohol.
1933 P	Nichol's Comp. Kola Cordial.	Billings, Clapp Company, Boston, Mass.,	Contained cocaine.
q-408	Milk,	Joseph S. French, West Medford, Mass.,	10.59 per cent. solids; contained added water.
7723	Milk,	Martin E. Eagan, Pittsfield, Mass.,	11.31 per cent. solids; contained added water.
q-483	Milk,	Edward C. Wright, Chelmsford, Mass.,	9.76 per cent. solids; contained added water.
2075 P	Milk,	} John Marinell, Jr., Chelmsford, Mass.,	10.84 per cent. solids; contained added water.
2119 P	Milk,		8.63 per cent. solids; contained added water.
7550 M	Milk,		11.04 per cent. solids; contained added water.

HEADACHE POWDERS.

Following are the results of the analysis of specimens of "headache powders" collected recently by the inspectors of food and drugs. It will be noted that some of these preparations bear no statement of the presence of acetanilide, and that others bear statements that are incorrect.

NAME OF POWDER.	Name on Package.	Statement on Label.	Result of Analysis.
Headache Konseals, . . .	E. E. Heinlein & Co., Brighton, .	Each konseal contains 5 grs. acetphenetidin.	5.8 grs. acetphenetidin.
Dexter's Headache and Antipain Powders.	Chas. H. Dexter, Boston, . . .	Each powder contains 4½ grs. antifebrin.	4.8 grs. antifebrin.
Johnson's Improved Headache Powders	The Johnson Pharmacy, Maynard, .	An ounce of powder contains 164 grs. acetanilide.	112.8 grs. acetanilide per ounce.
Thayer's Nerve-Rest Headache Powders.	Henry Thayer & Co., Cambridge, .	Each powder contains 4 grs. acetanilide,	3.4 grs. acetanilide.
Headache Powders, . . .	J. F. Gearan, Boston, . . .	Each powder contains 5 grs. acetphenetidin.	3.3 grs. acetphenetidin.
Dr. Kohler's Antedoto, . . .	Kohler Manufacturing Co., Baltimore, Md.	Each powder contains 5⅓ grs. acetphenetidin.	2.2 grs. acetphenetidin.
Paine's Headache Powders, .	Charles Paine, Allston, . . .	Each powder contains 4 grs. acetanilide,	3.98 grs. acetanilide.
Celero Headache Lozenge, .	The Celero Drug Co., Boston, .	Each lozenge contains 2 grs. acetanilide,	2.03 grs. acetanilide.
Headache Powders, . . .	The Tremont Pharmacy, Boston, .	4 grs. acetanilide to each powder, .	3.4 grs. acetanilide.
Johnson's Headache Powders, .	Walker, Rintels, Inc., Boston, .	Each powder contains 4 grs. acetanilide,	3.95 grs. acetanilide.
Surety Headache Cure, . . .	Gardner & Co., Boston, . . .	Each powder contains 6 grs. acetanilide,	2.98 grs. acetanilide.
Rourke's Headache Powders, .	D. F. Rourke, Boston, . . .	Each powder contains 5 grs. acetphenetidin.	4.8 grs. acetanilide.
Lewis' Headache Powders, .	Lewis, The Chemist, Boston, . .	Each powder contains 5 grs. acetanilide, 1 gr. phenacetine.	5.6 grs. acetanilide and phenacetine.
Norris' Headache Cachets, .	Adams House Drug Store, Boston, .	Each ounce contains 27.2 grs. caffeine, 136.2 grs. acetanilide.	143 grs. acetanilide and caffeine per ounce.
White Cross Headache Powder,	Harvey D. Watson Co., Allston, .	Each powder contains 3.5 grs. acetanilide.	2.84 grs. acetanilide.
Headache Powders, . . .	Henry A. Perham, Arlington, .	Each powder contains 4 grs. acetanilide,	3.2 grs. acetanilide.
Smith's Headache Powders, .	John D. Smith, Springfield, . .	An ounce of powder contains 164 grs. acetanilide.	161.1 grs. acetanilide per ounce.
Headache Powders, . . .	A. T. Luscomb, Boston, . . .	No statement, . . .	5.5 grs. acetanilide.
Leroy Headache Powders, .	Albert L. Wymann, Boston, . .	Each powder contains 4 grs. acetanilide,	3.6 grs. acetanilide.
Bradbury's Capi-Cura, . . .	E. F. Bradbury, Boston, . . .	Each powder contains 3 grs. acetanilide,	2.0 grs. acetanilide.

Headache Powders, . . .	J. W. Colburn & Co., Boston, . . .	Each powder contains 3.5 grs. acetanilide.	2.81 grs. acetanilide.
Worcester Headache Relief, . .	A. W. Fuller, Boston, . . .	Each ounce of powder contains 127.5 grs. acetphenetidin.	116.91 grs. acetphenetidin.
Superior Headache Powders, . .	Choate Drug & Chemical Co., Boston, . .	100 grs. acetanilide in each ounce of powder.	159.58 grs. acetanilide per ounce.
Shawmut Headache Powders, . .	D. Michark, Boston, . . .	No statement, . . .	7.8 grs. phenacetine.
Omega Headache Powders, . . .	Dodgo's Pharmacy, Everett, . . .	No statement, . . .	3.5 grs. phenacetine and acetanilide.
Munkley's Improved Headache Powders.	Munkley & Co., Boston, . . .	No statement, . . .	4.9 grs. acetanilide.
Headache Cure, . . .	Standard Drug Co., Boston, . . .	No statement, . . .	5.7 grs. acetanilide.
Chamberlain's Headache Powders.	W. H. Chamberlain, Dorchester, . . .	No statement, . . .	3.3 grs. acetanilide and caffeine.
Celery & Caffeine Headache Capsules.	Freeman Pharmacal Co., Portland, Me., . .	Each capsule contains 0.16 gm. acetanilide.	0.12 gm. acetanilide.
Kefaline Headache Cure, . . .	The Kefaline Company, Boston, Mass., . .	It contains 180 grs. acetphenetidinum to the ounce.	195.6 grs. to the ounce.
Travis & Cunningham's Headache Powders.	Travis & Cunningham, So. Framingham, Mass.	Each powder contains 3 grs. acetanilide,	1.76 grs. acetanilide.
Thayer's Headache Powders, . .	Chas. F. Thayer, So. Framingham, Mass.	Each powder contains 3 grs. acetanilide,	1.2 grs. acetanilide.
Curtis' X Ray Headache Powders.	C. L. Curtis, So. Framingham, Mass., . .	Each powder contains 3.5 grs. acetanilide.	2.5 grs. acetanilide.
Headache Powders, . . .	Robbins & Rice, So. Framingham, Mass.	Each powder contains 3.5 grs. acetanilide.	2.43 grs. acetanilide.
Hunt's Cafenactin Compound, . .	W. B. Hunt Co., Boston, Mass, . . .	Contains 90% acetphenetidin, . . .	90% acetphenetidin.
Headache Kouseals or Wafers, . .	Shubert & Cologny, Boston, Mass., . .	Each wafer contains 4 grs. acetanilide,	3.51 grs. acetanilide.
Headache Powders, . . .	Bank St. Drug Store, North Adams, Mass.	An ounce of powder contains 164 grs. acetanilide.	161.2 grs. acetanilide to the ounce.
Headache Powders, . . .	John A. Rice, North Adams, Mass., . .	Each powder contains 5 grs. acetanilide,	3.72 grs. acetanilide.
Fitzgerald's Headache Powders, . .	J. H. Fitzgerald, Cambridge, Mass., . .	Each powder contains 4 grs. acetanilide,	3.68 grs. acetanilide.
Dr. Davis' Anti-Headache or Half-Hour Headache Cure.	Dr. N. C. Davis, Indianapolis, Ind., . .	No statement, . . .	4.93 grs. acetanilide.
Dr. Paxton's Headache & Neuralgia Cure.	Dr. Paxton's Medical Co., Troy, N. Y., . .	No statement, . . .	4.42 grs. acetanilide.
Quick Relief Headache Kouseals, . .	Henry Adams & Co., Springfield, Mass., . .	No statement, . . .	3.62 grs. acetanilide and caffeine.
Funny How Quick Headache & Neuralgia Cure.	Funny How Quick Co., Lynn, Mass, . .	No statement, . . .	Contains acetanilide.
Caffeline Headache Tablets, . .	W. T. Cummings, Winchendon, Mass., . .	No statement, . . .	Contains acetanilide.

PROPRIETARY PREPARATIONS ADVERTISED AS UN- SALABLE DURING MAY, 1908.

Chamberlain's Mentholated Codeine. W. H. Chamberlain, 73 Green Street, Boston; 357 Adams Street, Dorchester, Mass. (No statement of the amount of codeine.)

Robustine. Con Keefe, 8-10 Cambridge Street, Boston. (No statement of the amount of alcohol.)

Rock, Rye and Honey; The Great French Remedy. Edward Heffernan, Sole Proprietor, Lynn, Mass. (No statement of the amount of alcohol.)

INSPECTION OF DAIRIES.

During the month of May, 1908, 154 dairies were examined in the following places:—

PLACE.	Number examined.	Number found to present No Objectionable Features.	Per Cent.	Number to which Letters were sent.	Per Cent.
Buckland,	12	5	41.67	7	58.33
Chicopee,	15	9	60.00	6	40.00
Second inspection,	14	11	78.57	3	21.43
Concord,	8	5	62.50	3	37.50
Second inspection,	23	22	95.65	1	4.35
Essex,	—	—	—	—	—
Second inspection,	5	5	100.00	—	—
Everett,	—	—	—	—	—
Second inspection,	2	1	50.00	1	50.00
Gill,	4	1	25.00	3	75.00
Granby,	3	1	33.33	2	66.67
Second inspection,	13	9	69.23	4	30.77
Hardwick,	—	—	—	—	—
Second inspection,	1	—	—	1	100.00
Malden,	11	4	36.36	7	63.64
Second inspection,	8	5	62.50	3	37.50
Third inspection,	12	9	75.00	3	25.00
Medford,	1	—	—	1	100.00
Second inspection,	2	1	50.00	1	50.00
Montague,	5	3	60.00	2	40.00
Northfield,	2	1	50.00	1	50.00
Reading,	—	—	—	—	—
Second inspection,	3	2	66.67	1	33.33
Revere,	1	—	—	1	100.00
Saugus,	—	—	—	—	—
Third inspection,	2	1	50.00	1	50.00
Shelburne,	4	1	25.00	3	75.00
South Hadley,	—	—	—	—	—
Second inspection,	1	1	100.00	—	—
Warren,	—	—	—	—	—
Second inspection,	1	—	—	1	100.00
Winchester,	1	1	100.00	—	—

Total number of dairies examined,	154
Number found to be free from objectionable conditions,	98
Number to which letters were sent,	56
Total number of conditions to which attention was called,	167
Percentage of dairies which passed inspection,	63.64

The names of the owners of dairies found to be worthy of commendation follow: —

Buckland.

Buckland Town Farm.
King, A. M.

Tower, George
Trow, E. W.

Wells, Willis

Chicopee.

Baker, C. E.¹
Biernacki, Marcin¹
Carpenter, Henry
Chapin, C. G.¹
Chapin, George H.¹
Crehore, C. W.²
Dana, Moses C.¹

Elmer, E. E.²
Farman, P.
Freeman, Eugene C.
Goodbird, John
Hahn, G.¹
Hartnett, P. J.
Kennedy, Patrick

McKinstry, A. W.
Menny, Joseph
St. Germaine, C.
Shaw, E. L.²
Steadman, E. P.¹
Sturtevant, A. M.²

Concord.

Baker, George M.²
Brigham, H. W.²
Brown, B. W.²
Brown, John¹
Dakin, A. B. C.¹
Derby, Benjamin
Derby, Henry¹
Hubbard, George H.
Hutchins, Rev. C. L.

Keefe, D. H.¹
Macone, A.¹
Mason, David¹
Mason, T.¹
Miles, Granville¹
Miner, Charles L.¹
Neal, A. G.¹
Sheehan, John
Walcott, W. E.

Wheeler, A. G.²
Wheeler, Anson¹
Williams, F. A.¹
Williams, George H.²
Williams, Martin¹
Williams, Misses¹
Williams, R. H.¹
Worthly, Hiram¹
Wright, George H.²

Essex.

Andrews, F. F.¹
Andrews, Frank¹

Cogswell, George E.¹
Haskel, B.¹

Lucas, Fred¹

Everett.

Peterson, John A.²

Gill.

Sokoltoski, Kosanti

Granby.

Alcock, Caleb C.
Buckland, C. A.¹
Clark, C. R.¹
Porter, T. P.¹

Prentiss, R. P.²
Taylor, John G.¹
Tilley, Otis¹

Warner, Arthur¹
Warner, Eugene¹
Warner, Herbert E.¹

Malden.

Baker, Robert B.³
Desmond, Charles F.³
Epstein, Samuel³
Glass, Louis
Hadley, Mrs. Nellie A.²
Hallaway, M. A.³

Maher, M. T.²
Mahoney, Mrs. M. L.²
McDonald, Angus²
Quesnel, Henry S.²
Robbins, Daniel C.³
Schraager, M.

Steves, A. J.³
Tappin, E.
Whitehead, Mrs. Julia³
Wiener, A. J.³
Wiggins, James B.³
Winstan, David

¹ Second inspection.

² Reported favorably on first inspection as well.

³ Third inspection.

*Medford.*Grover, E. A.¹

Donaldson & Brown

Montague.

Eddy, Francis

Reynolds, E. G.

Northfield.

Parker, Frank C.

*Reading.*Foley, T. L.²Turner, W. P.²*Saugus.*Spencer, Thomas³*Shelburne.*

Maxwell, B. F.

*South Hadley.*Pops, John¹*Winchester.*

Churchill, Frank E.

**REGULATIONS FOR THE SALE AND CARE OF MILK,
ADOPTED BY THE BOARD OF HEALTH OF CONCORD,
MASS.**

IN BOARD OF HEALTH, CONCORD, MASS., April 23, 1908.

It is the opinion of the board of health of the town of Concord that producing, storing, cooling, mixing, selling, delivering, or distributing milk under conditions contrary in any respect to the following regulations is a cause of sickness within said town, and is and may be injurious and dangerous to the public health, and that milk produced, stored, cooled, mixed, sold, delivered, or distributed under such conditions is capable of containing and conveying infection and contagion and of creating sickness. This board hereby adjudicates that the following regulations are necessary for the public health and safety, and the same are hereby made and adopted. This board hereby prohibits producing, storing, cooling, mixing, selling, delivering, or distributing milk within the limits of this town contrary to any of said regulations.

¹ Second inspection.

² Reported favorably on first inspection as well.

³ Third inspection.

REGULATION I.

SECTION 1. All persons in the town of Concord engaged in the production of milk for sale, or in the business of selling, delivering, or distributing milk in said town, shall annually before the first day of June make written application to the inspector of milk for a license, on forms prescribed by the board of health.

SECTION 2. No person in the town of Concord shall engage in the business of producing milk for sale, or in the sale or distribution of milk, without a license so to do, under these regulations and such other conditions as the board of health may impose; and said license shall be revoked if the licensee fails to comply with the conditions of his license or the regulations of this board.

SECTION 3. All persons having a license to sell, deliver or distribute milk in the town of Concord shall keep a copy of the license constantly posted in a conspicuous place on the premises, and every person using a carriage or other vehicle for the delivery of milk for the purpose of sale in the town of Concord shall have his name, license number and place of business legibly placed on each outer side of such carriage or vehicle.

SECTION 4. The conditions under which every cow is kept whose milk is brought into the town of Concord, or kept, delivered, distributed, sold, or offered for sale in said town, shall be made known to the inspector of milk by the licensee in such detail as he may require, and shall be approved by the board of health. No milk except that derived from such cow shall be brought, kept, delivered, distributed, sold, or offered for sale in said town.

REGULATION II.

SECTION 1. No milk for sale or distribution shall be stored in that portion of a building which is used for the stabling of horses, cows, or other animals, or for the storing of manure, or in any room used in whole or in part for domestic or sleeping purposes.

SECTION 2. No person in the town of Concord engaged in the business of producing milk for sale or of storing or delivering milk in said town shall store, cook or mix said milk in any room which is occupied by horses, cows, or other animals. All rooms in which milk is stored, cooled, or mixed shall be provided with tight walls and floor and shall be kept constantly clean, the walls and floor to be so constructed as to allow of easy and thorough cleansing. The room or rooms aforesaid shall contain proper appliances for washing or sterilizing all utensils actually employed in the storage, sale, or distribution of milk, and all such utensils shall be washed with boiling water or sterilized by steam each time after being used.

SECTION 3. No urinal, water-closet, or privy shall be located in the rooms specified in the preceding section, or so situated as to pollute the atmosphere of said rooms.

SECTION 4. All milk produced for the purpose of sale shall be strained and cooled as soon as it is drawn from the cow.

SECTION 5. All wagons used in the conveyance of milk for sale or distribution shall be kept in a cleanly condition and free from offensive odors.

REGULATION III.

SECTION 1. No person shall sell or deliver or have in his possession with intent to sell or deliver any milk of a temperature exceeding 50 degrees fahrenheit.

SECTION 2. Milk kept for sale in any store, shop, restaurant, market, bakery, or elsewhere shall be kept in a covered cooler, box, or refrigerator. No vessel containing milk for sale shall be allowed to stand outside said cooler, box, or refrigerator, except while a sale of said milk is being made. Every such cooler, box, or refrigerator shall be properly drained and cared for, and shall be kept only in such locations and under such conditions as shall be approved by the Board of Health.

REGULATION IV.

SECTION 1. Every person engaged in the business of producing, storing, selling, delivering, or distributing milk in the town of Concord shall immediately notify the board of health of the occurrence of any infectious disease in himself, or in his family, or amongst his employees, or within the buildings or premises where milk is produced, stored, sold, or distributed, and he shall suspend the sale and distribution of milk until authorized to resume the same by the board of health.

SECTION 2. No vessels which have been handled by persons suffering with or directly exposed to an infectious disease shall be used to hold or convey milk until they have been thoroughly sterilized.

AN UNUSUALLY EXTENSIVE MILK-BORNE OUTBREAK OF TYPHOID FEVER IN JAMAICA PLAIN.

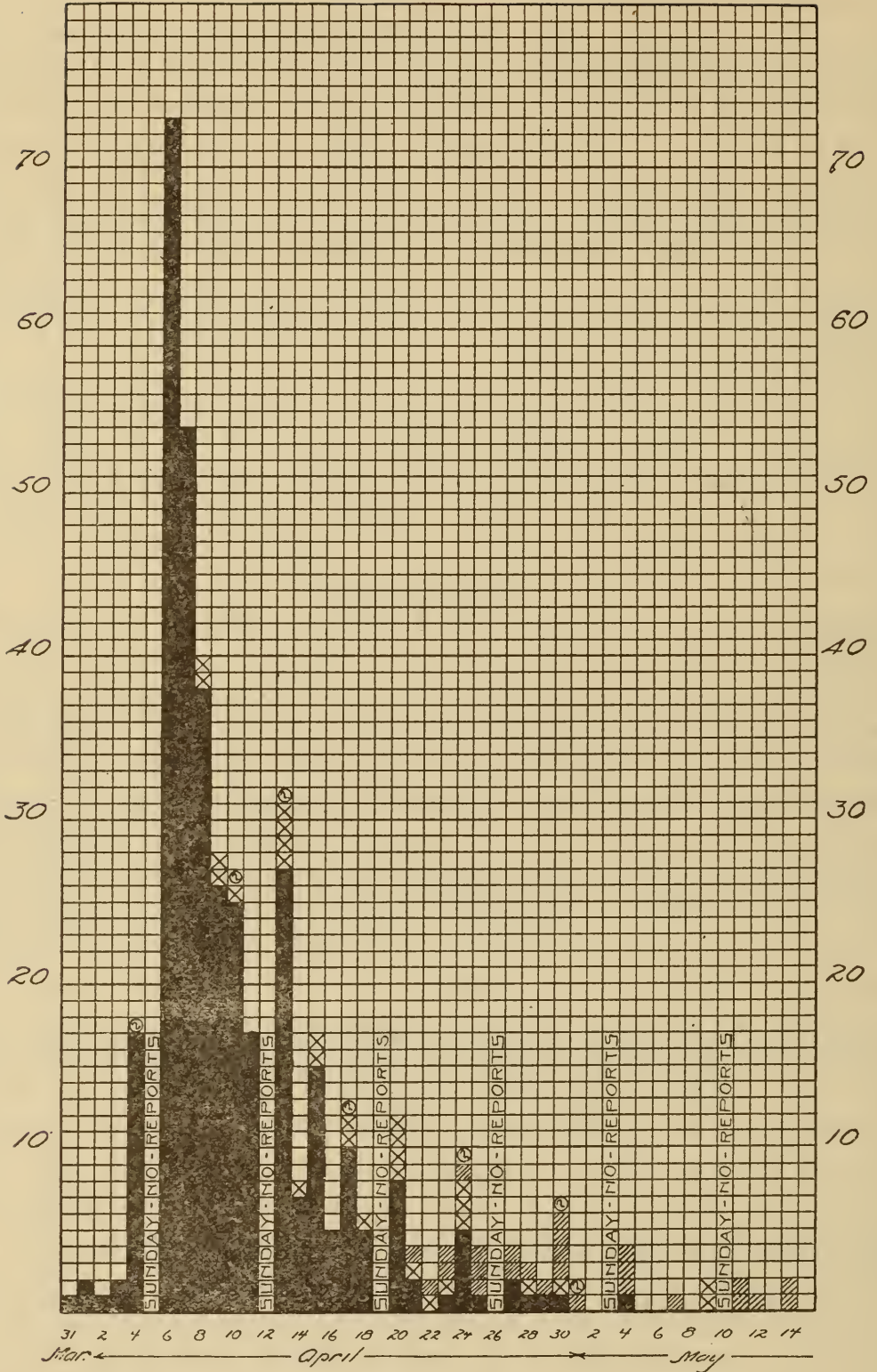
BY THE SECRETARY OF THE BOARD.

On March 31, 1908, after several months of practical freedom from typhoid fever, a case of that disease occurred in Jamaica Plain, followed on April 1 by 2 more, on April 2 by 1, and on April 3 by 2. On April 4 inquiry was made as to the possibility of a common cause, and it was learned that more cases were being reported. The number reported for that day proved to be 17. On Monday, April 6, the number reported was 73 (which number includes the cases of two days, there being no mail delivery on Sunday), and during the next five days the numbers

reported were, respectively, 54, 38, 26, 25 and 17. From Monday, April 13, to Saturday, April 18, inclusive, the numbers reported were, respectively, 32 (Sunday and Monday), 7, 17, 5, 13 and 5. During the next week the numbers were, respectively, 12 (Sunday and Monday), 4, 2, 4, 10 and 4. Between Monday, April 27, and May 15 the total number of cases reported was 30, a majority of which (18) were undoubtedly contact cases. There were thus reported during this period of about six weeks no fewer than 410 cases of typhoid fever, in which total are not included the cases of two persons who came into the district already ill and a number which in the excitement naturally caused were wrongly diagnosed as typhoid.

So sudden an explosion, occurring in a district hitherto practically free from the disease, suggested, before it had reached its height, the probability of a common milk supply. It was learned on April 5 that 23 of the 24 cases already reported were on the routes of two milkmen. The 73 cases reported on April 6, the 54 reported on April 7, all but 6 of the rest of the cases reported during that week, and all but 12 of the cases reported during the second week were also on the same milk routes.

Of the 410 cases reported, 348 primary and 23 secondary cases proved to be in families supplied by these two men, who hereafter will be designated as F and Q. Since the number of cases occurring on each route was about the same (primary, 175 and 173; secondary, 6 and 17, respectively), and for reasons which will presently appear, the two supplies are presented as one in the accompanying chart, which illustrates the characteristically explosive nature of a milk-borne outbreak. There were 29 cases in which no history of the use of their milk could be obtained, and 7 in which there was a possibility that the victims had on some one or another day drunk it. Those 36 persons were among the regular customers of no fewer than 15 different milkmen. More than half of them were adults, who, in going about freely and perhaps lunching and dining in restaurants and in the homes of their friends, may have consumed some of the same milk, or may have ingested the infection with some other article of food; and all but 3 of the remainder were children of school age, who also doubtless visited about to some extent.



Age Periods.—The persons seized in this outbreak were distributed according to age as follows:—

[illegible]

Number of Households invaded.—The 410 cases were distributed as follows:—

Single cases in 216 households divided as to milk supply as follows:—

F,	.	.	.	.	.	,	.	.	.	.	.	.	.	.	.	.	97
Q,	.	.	.	.	.	:	.	.	.	.	.	.	.	.	.	.	86
All other milkmen,	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	33 ¹
																	216

In 79 households multiple cases occurred as follows:—

2 cases,	. . .	57 households,	. . .	total, 114;	contacts, 12
3 cases,	. . .	12 households,	. . .	total, 36;	contacts, 7
4 cases,	. . .	7 households,	. . .	total, 28;	contacts, 5
5 cases,	. . .	2 households,	. . .	total, 10;	contact, 1
6 cases,	. . .	1 household,	. . .	total, 6;	-
		<u>79</u>		<u>194</u>	<u>25</u>

Of the total number of contact cases (26), 23 occurred in households supplied by F and Q.

The Milk Supply of F and Q. — In common with eight other milkmen, Messrs. F and Q obtained their supply from the car of a contractor who derived this particular carload from eight towns, in none of which had a case of typhoid fever occurred during the previous three months, excepting that of an Italian laborer in no way connected with milk production. Each milkman who went to this car received milk from the same dairies regularly, and the fact that there was but one dairy whose product was given to both F and Q was naturally suggestive that the infective material came to Jamaica Plain from this particular dairy. Inquiry at the place of production revealed that not only was there no history there of any sickness whatever, but also the interesting fact that the owner was marketing about 60 cans a day, only 40 of which

¹ Including 1 contact.

were sent to Jamaica Plain, 20 being sold daily to a dealer in another place, where there had been but one case of typhoid fever, and that one not on his route. It was evident, therefore, that the infection did not come from the premises of this producer.

Among the first victims of the disease to be reported was the milkman F himself (April 4). It appears that on or about March 20 F consulted his family physician, who concluded that F was merely tired and overworked. From that time until April 2 F felt ill, but was able to attend to his daily work, which included the general handling of his milk. On April 1 he consulted his physician again, and at that time his temperature was 100° , and he was suffering with diarrhoea. On April 2 a diagnosis of typhoid fever was made, and he took to his bed. On April 10 he died, and the autopsy performed by Dr. George B. Magrath revealed, among other lesions, an ulcer, 1.5 by 2 centimeters, at a point about 60 centimeters below the ileocaecal valve, which ulcer, being of not less than three weeks' development, indicates that F must have been suffering from typhoid fever as early as March 20. Other lesions observed in the intestines — numerous ulcers of varying size — were of more recent origin, and represented, according to Dr. Magrath, the conditions found toward the end of the second week.

Considering that F had been ailing for a period of about two weeks before he took to his bed, but not to such an extent as to prevent him from handling the milk, it is not difficult to surmise in what manner the supply became contaminated with the exciting cause of the disease, for the hands of the average milkman do not receive the same degree of care as those of an operating surgeon, and with more or less frequent occasion for interrupting the work of handling the milk in order to respond to natural calls, specific contamination, first of the fingers and then of the milk, is very likely to occur.

With the supply of Q, however, the connection is by no means clear. It was reported that Q received from the dairy which they had in common only those cans which F left for him, after tasting all and selecting those which he wished for his own trade. This, however, is denied on apparently good authority, and, instead, it is said that on only two occasions, namely, March 15 and March 18, did F precede Q at the car. It is further stated that although each can was tasted before acceptance, those that were rejected were set aside and not delivered to Q. However this may be, and whether or not F had an opportunity to infect the milk of Q on either of these two days or on any subsequent day, it is certain that there was the greatest possibility of an interchange of cans between F and Q, for it was the custom of each to return the cans to the car washed, but by no means sterilized; and after they were filled at the

dairy and returned, Q was as likely as F to receive cans which had been supplied to and handled and returned by F. Certain it is that the first infection did not occur at the place of production and was not due to the fault of the farmer; and equally certain is it that F, during two weeks of ambulant typhoid fever, had ample opportunity to infect his supply and to reinfect it again and again, and to spread the infection to Q's supply through the nonsterilized cans of the contractor, which they used in common.

MONTHLY BULLETIN

OF THE

STATE BOARD OF HEALTH

OF

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STATE BOARD OF HEALTH.

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BOSTON
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1908

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WEEKLY RETURNS OF DEATHS FROM CITIES AND TOWNS OF MORE THAN 10,000 POPULATION.

WEEK ENDING JUNE 6, 1908.

CITIES AND TOWNS.	Population, ¹ estimated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	617,082	188	53	52	13	19	3	3	2
Worcester,	134,341	41	10	12	3	4	2	—	—
Fall River,	106,305	30	10	14	—	6	2	1	—
Cambridge,	100,922	21	6	6	3	2	1	—	—
Lowell,	96,380	33	9	13	4	9	—	—	—
Lynn,	82,661	22	4	3	—	2	—	—	—
New Bedford,	82,580	20	6	3	2	1	—	—	—
Springfield,	81,425	26	4	3	1	1	—	—	—
Lawrence,	78,000	16	5	1	1	—	—	—	—
Somerville,	74,295	10	3	4	3	1	—	—	—
Brockton,	53,131	10	4	1	—	—	—	—	—
Holyoke,	52,652	13	6	4	—	3	—	—	—
Malden,	40,929	8	—	2	—	2	—	—	—
Chelsea,	39,363	3	1	1	—	1	—	—	—
Newton,	38,919	5	—	2	—	2	—	—	—
Salem,	38,666	12	6	4	3	1	—	—	—
Haverhill,	38,228	7	2	1	—	—	—	1	—
Fitchburg,	33,948	9	2	—	—	—	—	—	—
Everett,	32,415	7	1	2	—	1	1	—	—
Taunton,	30,967	12	1	5	2	1	—	—	—
Quincy,	30,924	3	1	—	—	—	—	—	—
Waltham,	28,120	6	1	1	—	1	—	—	—
Pittsfield,	27,168	10	2	3	2	1	—	—	—
Gloucester,	26,011	1	—	—	—	—	—	—	—
Brookline,	25,825	9	—	1	—	1	—	—	—
North Adams,	22,150	1	—	—	—	—	—	—	—
Chicopee,	20,831	8	3	1	—	1	—	—	—
Northampton,	20,789	7	0	1	—	—	—	1	—
Medford,	20,605	5	—	—	—	—	—	—	—
Beverly,	16,088	6	2	1	—	—	—	—	1
Leominster,	15,578	7	1	—	—	—	—	—	—
Hyde Park,	15,327	2	0	1	—	1	—	—	—
Melrose,	15,160	3	2	1	1	—	—	—	—
Newburyport,	14,794	—	—	—	—	—	—	—	—
Woburn,	14,492	2	—	1	—	1	—	—	—
Westfield,	14,457	2	1	—	—	—	—	—	—
Marlborough,	14,359	6	1	1	—	1	—	—	—
Revere,	14,248	4	2	1	1	—	—	—	—
Attleborough,	13,600	2	1	—	—	—	—	—	—
Peabody,	14,144	—	—	—	—	—	—	—	—
Adams,	13,375	4	1	1	—	1	—	—	—
Clinton,	13,105	3	0	2	1	1	—	—	—
Gardner,	12,794	3	2	—	—	—	—	—	—
Milford,	12,565	7	1	2	—	—	—	—	2
Watertown,	12,306	3	1	—	—	—	—	—	—
Plymouth,	12,149	—	—	—	—	—	—	—	—
Weymouth,	11,744	1	0	—	—	—	—	—	—
Framingham,	11,698	3	—	1	1	—	—	—	—
Southbridge,	11,630	2	1	—	—	—	—	—	—
Wakefield,	10,903	—	—	—	—	—	—	—	—
Webster,	10,825	—	—	—	—	—	—	—	—
Arlington,	10,307	3	1	1	—	—	1	—	—

Recapitulation.

Total of reporting towns, .	2,318,465	606	157	153	41	65	10	6	5
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¹ The populations were estimated upon the rate of growth from 1900 to 1905. Those of Taunton, Gloucester, North Adams and Clinton were allowed to stand as in 1905, having shown no increase during the five-year period. The gain in the population of Lowell is due to the annexation of a part of the town of Tewksbury. The population of Lawrence by the census of 1905 was 70,050, but, owing to the building of the new Wood and Arlington mills, employing at present some 3,000 operatives, an increase of about 8,000 is estimated by the Lawrence board of health, or 78,000.

WEEK ENDING JUNE 13, 1908.

CITIES AND TOWNS.	Population. Esti- mated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —						
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phtisis.	Diphtheria.	Typhoid Fever.	Measles.	
Boston,	617,082	206	63	47	13	13	3	1	11	
Worcester,	134,341	34	8	8	-	7	-	-	-	
Fall River,	106,305	32	15	13	3	2	1	-	-	
Cambridge,	100,922	13	4	3	1	1	1	-	-	
Lowell,	96,380	25	7	6	4	1	-	-	-	
Lynn,	82,661	14	0	1	-	-	1	-	-	
New Bedford,	82,580	14	3	4	2	2	-	-	-	
Springfield,	81,425	14	4	2	1	1	-	-	-	
Lawrence,	78,000	17	3	6	3	-	-	-	-	
Somerville,	74,295	15	2	4	1	2	-	1	-	
Brockton,	53,131	11	2	-	-	-	-	-	-	
Holyoke,	52,652	15	9	4	1	-	1	-	-	
Malden,	40,929	9	3	1	-	1	-	-	-	
Chelsea,	39,363	8	2	1	-	-	1	-	-	
Newton,	38,919	8	2	1	1	-	-	-	-	
Salem,	38,666	13	1	2	-	1	-	1	-	
Haverhill,	38,228	15	4	4	1	2	-	-	-	
Fitchburg,	33,948	-	-	-	-	-	-	-	-	
Everett,	32,415	4	2	1	-	-	-	-	-	
Taunton,	30,967	8	3	3	1	1	-	-	-	
Quincy,	30,924	6	1	2	-	2	-	-	-	
Waltham,	28,120	8	2	1	-	-	1	-	-	
Pittsfield,	27,163	4	0	-	-	-	-	-	-	
Gloucester,	26,011	4	-	2	-	2	-	-	-	
Brookline,	25,825	6	-	-	-	-	-	-	-	
North Adams,	22,150	1	-	-	-	-	-	-	-	
Chicopee,	20,831	4	4	1	1	-	-	-	-	
Northampton,	20,789	6	2	3	-	1	-	1	1	
Medford,	20,605	7	-	2	-	2	-	-	-	
Beverly,	16,088	5	-	-	-	-	-	-	-	
Leominster,	15,578	2	1	-	-	-	-	-	-	
Hyde Park,	15,327	3	0	1	-	1	-	-	-	
Melrose,	15,160	4	0	-	-	-	-	-	-	
Newburyport,	14,794	-	-	-	-	-	-	-	-	
Woburn,	14,492	1	1	1	-	1	-	-	-	
Westfield,	14,457	3	-	-	-	-	-	-	-	
Marlborough,	14,359	4	0	-	-	-	-	-	-	
Revere,	14,248	3	1	1	-	-	1	-	-	
Attleborough,	13,600	2	1	2	-	1	-	-	-	
Peabody,	14,144	-	-	-	-	-	-	-	-	
Adams,	13,375	4	2	2	-	2	-	-	-	
Clinton,	13,105	5	1	-	-	-	-	-	-	
Gardner,	12,794	4	1	3	-	2	-	-	-	
Milford,	12,565	3	-	2	1	1	-	-	-	
Watertown,	12,306	5	1	1	1	-	-	-	-	
Plymouth,	12,149	-	-	-	-	-	-	-	-	
Weymouth,	11,744	1	0	-	-	-	-	-	-	
Framingham,	11,698	-	-	-	-	-	-	-	-	
Southbridge,	11,630	1	-	-	-	-	-	-	-	
Wakefield,	10,903	-	-	-	-	-	-	-	-	
Webster,	10,825	-	-	-	-	-	-	-	-	
Arlington,	10,307	0	-	-	-	-	-	-	-	

Recapitulation.

Total of reporting towns,	2,272,819	571	155	135	35	49	10	4	12
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WEEK ENDING JUNE 20, 1908.

CITIES AND TOWNS.	Population. estimated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM—					
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	617,082	203	59	59	18	21	3	2	8
Worcester,	134,341	34	11	7	1	1	1	—	1
Fall River,	106,305	43	24	3	—	1	—	1	—
Cambridge,	100,922	23	6	10	4	5	—	—	—
Lowell,	96,380	28	10	7	4	2	—	—	1
Lynn,	82,661	10	2	2	—	1	—	—	—
New Bedford,	82,580	21	7	7	1	2	—	—	—
Springfield,	81,425	17	5	3	2	1	—	—	—
Lawrence,	78,000	27	8	5	2	1	—	—	—
Somerville,	74,295	20	4	4	2	1	—	—	—
Brockton,	53,131	14	5	4	2	2	—	—	—
Holyoke,	52,652	17	10	2	—	1	—	—	—
Malden,	40,929	3	0	—	—	—	—	—	—
Chelsea,	39,363	7	1	—	—	—	—	—	—
Newton,	38,919	2	—	—	—	—	—	—	—
Salem,	38,666	10	5	1	1	—	—	—	—
Haverhill,	38,228	11	2	2	—	2	—	—	—
Fitchburg,	33,948	5	2	1	—	—	—	1	—
Everett,	32,415	6	3	2	—	1	—	—	—
Taunton,	30,967	6	1	1	—	—	—	—	—
Quincy,	30,924	0	—	—	—	—	—	—	—
Waltham,	28,120	9	3	2	—	—	—	1	1
Pittsfield,	27,168	11	2	5	2	3	—	—	—
Gloucester,	26,011	6	2	1	—	1	—	—	—
Brookline,	25,825	4	2	—	—	—	—	—	—
North Adams,	22,150	5	1	1	—	—	—	1	—
Chicopee,	20,831	6	3	—	—	—	—	—	—
Northampton,	20,789	6	1	1	—	—	1	—	—
Medford,	20,605	3	—	—	—	—	—	—	—
Beverly,	16,088	5	—	3	2	1	—	—	—
Leominster,	15,578	0	—	—	—	—	—	—	—
Hyde Park,	15,327	3	0	1	1	—	—	—	—
Melrose,	15,160	6	3	1	—	—	—	—	—
Newburyport,	14,794	—	—	—	—	—	—	—	—
Woburn,	14,492	4	—	—	—	—	—	—	—
Westfield,	14,457	6	1	—	—	—	—	—	—
Marlborough,	14,359	4	0	—	—	—	—	—	—
Revere,	14,248	2	—	—	—	—	—	—	—
Attleborough,	13,600	1	0	—	—	—	—	—	—
Peabody,	14,144	—	—	—	—	—	—	—	—
Adams,	13,375	—	—	—	—	—	—	—	—
Clinton,	13,105	4	2	—	—	—	—	—	—
Gardner,	12,794	2	1	1	—	—	—	—	1
Milford,	12,565	3	2	1	1	—	—	—	—
Watertown,	12,306	1	0	1	—	—	—	—	—
Plymouth,	12,149	—	—	—	—	—	—	—	—
Weymouth,	11,744	3	0	—	—	—	—	—	—
Framingham,	11,698	2	—	—	—	—	—	—	—
Southbridge,	11,630	2	—	—	—	—	—	—	—
Wakefield,	10,903	—	—	—	—	—	—	—	—
Webster,	10,825	—	—	—	—	—	—	—	—
Arlington,	10,307	3	—	—	—	—	—	—	—

Recapitulation.

Total of reporting towns,	2,305,090	608	188	138	43	47	5	6	12
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WEEK ENDING JUNE 27, 1908.

CITIES AND TOWNS.	Population. Esti- mated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —						
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.	
Boston,	617,082	168	46	50	16	23	3	—	2	
Worcester,	134,341	44	15	10	—	2	3	1	—	
Fall River,	106,305	42	26	6	—	1	—	—	3	
Cambridge,	100,922	28	10	9	2	4	—	—	—	
Lowell,	96,380	41	15	8	2	2	1	—	—	
Lynn,	82,661	21	7	3	—	2	1	—	—	
New Bedford,	82,580	28	13	11	2	2	1	—	—	
Springfield,	81,425	17	7	4	—	1	1	—	—	
Lawrence,	78,000	20	9	6	1	3	—	—	—	
Somerville,	74,295	25	7	4	2	1	—	—	—	
Brockton,	53,131	14	7	4	2	1	1	—	—	
Holyoke,	52,652	21	8	1	—	1	—	—	—	
Malden,	40,929	12	4	2	2	—	—	—	—	
Chelsea,	39,363	5	1	—	—	—	—	—	—	
Newton,	38,919	3	—	1	1	—	—	—	—	
Salem,	38,666	11	6	4	1	2	—	1	—	
Haverhill,	38,228	11	2	1	—	—	—	1	—	
Fitchburg,	33,948	—	—	—	—	—	—	—	—	
Everett,	32,415	6	1	—	—	—	—	—	—	
Taunton,	30,967	10	2	4	1	2	—	—	—	
Quincy,	30,924	5	0	—	—	—	—	—	—	
Waltham,	28,120	5	1	1	—	—	—	1	—	
Pittsfield,	27,168	9	1	1	1	—	—	—	—	
Gloucester,	26,011	9	3	1	—	1	—	—	—	
Brookline,	25,825	3	—	—	—	—	—	—	—	
North Adams,	22,150	2	1	—	—	—	—	—	—	
Chicopee,	20,831	11	6	—	—	—	—	—	—	
Northampton,	20,789	12	1	4	1	3	—	—	—	
Medford,	20,605	3	—	—	—	—	—	—	—	
Beverly,	16,088	6	2	2	1	—	—	—	—	
Leominster,	15,578	2	1	—	—	—	—	—	—	
Hyde Park,	15,327	4	1	1	—	—	—	—	—	
Melrose,	15,160	1	0	—	—	—	—	—	—	
Newburyport,	14,794	—	—	—	—	—	—	—	—	
Woburn,	14,492	1	—	—	—	—	—	—	—	
Westfield,	14,457	1	—	—	—	—	—	—	—	
Marlborough,	14,359	5	1	—	—	—	—	—	—	
Revere,	14,248	4	2	2	1	1	—	—	—	
Attleborough,	13,600	3	—	—	—	—	—	—	—	
Peabody,	14,144	—	—	—	—	—	—	—	—	
Adams,	13,375	3	1	—	—	—	—	—	—	
Clinton,	13,105	3	0	—	—	—	—	—	—	
Gardner,	12,794	3	2	—	—	—	—	—	—	
Milford,	12,565	—	—	—	—	—	—	—	—	
Watertown,	12,306	2	0	—	—	—	—	—	—	
Plymouth,	12,149	—	—	—	—	—	—	—	—	
Weymouth,	11,744	3	1	—	—	—	—	—	—	
Framingham,	11,698	—	—	—	—	—	—	—	—	
Southbridge,	11,630	2	1	—	—	—	—	—	—	
Wakefield,	10,903	—	—	—	—	—	—	—	—	
Webster,	10,825	—	—	—	—	—	—	—	—	
Arlington,	10,307	8	1	1	—	1	—	—	—	

Recapitulation.

Total of reporting towns, . . .	2,260,254	637	212	141	36	53	11	4	5
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WEEKLY RETURNS OF DEATHS FROM CERTAIN INFECTIOUS DISEASES.

DEATHS FROM INFECTIOUS DISEASES NOT SPECIFICALLY MENTIONED IN
ABOVE TABLES DURING THE WEEKS OF JUNE 6, 13, 20 AND 27, 1908.

DISEASE.	Place.	WEEK ENDING —			
		June 6.	June 13.	June 20.	June 27.
Cerebro-spinal meningitis, .	Boston, . . .	—	2	—	1
	Fall River, . . .	—	—	—	1
	Hyde Park, . . .	—	—	—	1
	Worcester, . . .	2	1	1	1
Erysipelas,	Boston,	1	—	1	1
	Brockton,	1	—	—	—
	Haverhill,	—	1	—	—
	Lynn,	1	—	—	—
	Taunton,	1	—	—	—
	Watertown,	—	—	1	—
Scarlet fever,	Boston,	6	3	6	2
	Cambridge,	—	—	1	1
	Fall River,	—	2	1	1
	Holyoke,	1	—	—	—
	Lowell,	—	—	—	1
	Lynn,	—	—	1	—
	Taunton,	1	—	—	1
Whooping cough,	Beverly,	—	—	—	1
	Everett,	—	1	1	—
	Fall River,	1	—	—	—
	Melrose,	—	—	1	—
	Springfield,	—	—	—	1

WEEKLY RETURNS OF CASES OF INFECTIOUS DISEASES.

CASES OF INFECTIOUS DISEASES REPORTED DURING THE WEEKS OF JUNE
6, 13, 20 AND 27.

[Under the provisions of section 52 of chapter 75 of the Revised Laws.]

	WEEK ENDING —			
	June 6.	June 13.	June 20.	June 27.
Diphtheria,	150	151	140	109
Measles,	712	532	502	418
Scarlet fever,	97	118	99	103
Typhoid fever,	42	46	45	41
Tuberculosis, pulmonary,	71	101	116	122
Tuberculosis, other than pulmonary,	2	—	—	—
Cerebro-spinal meningitis,	1	3	3	4
Whooping cough,	67	27	14	6
Varicella,	23	15	15	10
Ophthalmia neonatorum,	—	—	—	1
Mumps,	2	1	—	—

MONTHLY REPORT ON INSPECTION OF FOOD AND DRUGS.

The following summary presents the results of the examination of food and drugs by the State Board of Health during the month of June, 1908:—

ARTICLES EXAMINED.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.	ARTICLES EXAMINED.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.
Butter,	1	—	1	Meat products:—			
Canned goods,	5	—	5	Hamburg steak,	6	6	12
Cheese,	1	—	1	Mince meat,	—	1	1
Cider,	4	1	5	Pressed meat,	2	—	2
Cocoa,	2	—	2	Sausages,	11	—	11
Corn meal,	1	—	1	Non-alcoholic			
Condensed milk,	3	1	4	drinks,	2	2	4
Cream,	2	—	2	Pickles,	5	1	6
Drugs,	87	29	116	Salad dressing,	3	—	3
Milk,	268	71	339	Syrups,	4	—	4
Flavoring ex-				Table sauces,	6	—	6
tracts,	4	—	4	Vinegar,	1	—	1
Honey,	1	—	1	Total,	429	112	541
Jams, jellies and							
preserves,	10	—	10				

The samples of drugs found to be adulterated were: sodium borate, spirits of camphor, tincture of iodine, and several proprietary medicines.

The cities and towns in which samples were collected were: Adams, Boston, Belmont, Burlington, Cambridge, Chelsea, Chelmsford, Danvers, Fall River, Foxborough, Hudson, Lawrence, Lowell, Lynn, Malden, Mansfield, Melrose, Natick, New Bedford, North Adams, Salem, Springfield, Stoneham, Stoughton, Swampscott, Wakefield, Waltham, Winchendon, Winchester, Westborough, Wellesley, Winthrop, Woburn and Worcester.

PROSECUTIONS FOR VIOLATIONS OF THE LAW RELATING TO FOOD AND DRUGS.

Convictions were secured during the month of June, 1908, for selling adulterated food and drugs and preparations containing cocaine, as follows:—

No.	Name of Defendant.	Place.	Character of Article sold.
1	William Young,	Springfield, . .	Alcohol; 75.38 per cent.
2	Michael J. Ganon,	Adams,	Alcohol; 51.07 per cent.
3	John F. Kershaw,	Boston,	Cocaine hydrochloride.
4	Frank Atherton,	Stoughton, . . .	Milk (total solids, 10.99).
5	Joseph M. LeCain (H. P. Hood & Sons).	Boston,	Milk (total solids, 11.60).
6	Wm R. McKenzie (Friend Bros.),	Lowell,	Milk (total solids, 11.62).
7	Eldon Meekins,	Stoneham, . . .	Milk (total solids, 8 27). ¹
8	Samuel P. Pike,	Lowell,	Milk (total solids, 11.62).
9	Herbert H. Russell,	Lowell,	Milk (total solids, 11.30).
10	Louis Serra,	Springfield, . .	Milk (total solids, 11.12). ¹
11	Louis Serra,	Springfield, . .	Milk (total solids, 11 12). ¹
12	Frank G. Wiley,	Stoneham, . . .	Milk (total solids, 11.06).
13	Edward C. Wright,	Chelmsford, . .	Milk (total solids, 11.07).
14	Andrew E. Burke,	Lawrence, . . .	Tincture of iodine, 55 per cent.
15	Downing Taylor Company, . .	Springfield, . .	Vinegar.
16	E. O. Smith Company,	Springfield, . .	Vinegar.
17	Sturtevant & Merrick Company,	Springfield, . .	Vinegar.

¹ Watered.

Fines imposed, \$408.

LIST OF ADULTERATED OR IMPROPERLY LABELLED FOODS, ETC., FOR JUNE, 1908.

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
8038 M 9-626	Gherkins, . . .	Lutz & Schramm Company, Allegheny, Pa., . .	Contained 0.81 per cent. alum.
7964 M	Tincture of iodine, . . .	Harry M. Church, New Bedford, . . .	80 per cent. of required strength.
1671 P	Tincture of iodine, . . .	J. A. Magloire Richards, Fall River, . . .	75 per cent. of required strength.
7590	Peruvian tonic, . . .	Depot Drug Store, Salem, . . .	Contained 18.68 per cent. alcohol.
	Laxakola Tonic Laxative, . . .	Laxakola Company, New York and Chicago, . .	Contained 14.74 per cent. alcohol.
2015 P	Bickford's Syrup, . .	Dr. Bickford, Lynn, . . .	Contained 19.49 per cent. alcohol.
7930	Parks Tonic Wine, . .	Ropes Drug Company, Salem, . . .	Contained cocaine.
2209 P	Milk, . . .	{ George W. Pierce, Danvers, . . .	Total solids 9.52 per cent.; contained added water.
2277 P	Milk, . . .	{ George W. Pierce, Danvers, . . .	Total solids 9.60 per cent.; contained added water.
2335 P	Milk, . . .	{ Streeter & Bailey, Winchendon, ¹ . . .	Total solids 8.23 per cent.; contained added water.
2433 P	Milk, . . .	{ Streeter & Bailey, Winchendon, ¹ . . .	Total solids 10.08 per cent.; contained added water.
2435 P	Milk, . . .	{ George W. Smith, Wakefield, ¹ . . .	Total solids 10.88 per cent.; contained added water.
2445 P	Milk, . . .	{ George W. Smith, Wakefield, ¹ . . .	Total solids 8.27 per cent.; contained added water.
2447 P	Milk, . . .	{ Eldon Meekins, Stoneham, ¹ . . .	Total solids 10.70 per cent.; contained added water.
2449 P	Milk, . . .	{ Eldon Meekins, Stoneham, ¹ . . .	Total solids 9.44 per cent.; contained added water.
2451 P	Milk, . . .	{ Eldon Meekins, Stoneham, ¹ . . .	Total solids 10.40 per cent.; contained added water.
7945	Milk, . . .	{ Anthony Rogers, North Andover, . . .	Total solids 10.48 per cent.; contained added water.
7946	Milk, . . .	{ Anthony Rogers, North Andover, . . .	Total solids 10.53 per cent.; contained added water.
7839	Milk, . . .	{ Elijah Hodian, Malden, . . .	Total solids 10.88 per cent.; contained added water; skimmed milk.
8002 M	Milk, . . .	Arthur St. Laurent, Fall River, . . .	Total solids 11.20 per cent., fat 2.20 per cent.; skimmed milk.
9-597	Milk, . . .	Samuel Schwalb, Chelsea, . . .	Total solids 10.80 per cent., fat 2.30 per cent.; skimmed milk.

¹ Milk producer.

INSPECTION OF DAIRIES.

During the month of June, 1908, 278 dairies supplying milk for public sale in Massachusetts were examined, 1 of which is situated in New Hampshire. The Massachusetts dairies yielded the following data:—

PLACE.	Number examined.	Number found to present no Objectionable Features.	Per Cent.	Number to which Letters were sent.	Per Cent.
Acton,	—	—	—	—	—
Second inspection,	52	28	53.85	24	46.15
Bedford,	5	2	40.00	3	60.00
Second inspection,	41	16	39.02	25	60.98
Carlisle,	6	4	66.67	2	33.33
Second inspection,	35	23	65.71	12	34.29
Third inspection,	2	1	50.00	1	50.00
Cohasset,	1	1	100.00	—	—
Second inspection,	9	8	88.89	1	11.11
Concord,	1	—	—	1	100.00
Second inspection,	38	29	76.32	9	23.68
Third inspection,	2	1	50.00	1	50.00
Dover,	—	—	—	—	—
Second inspection,	1	—	—	1	100.00
Lexington,	—	—	—	—	—
Second inspection,	23	8	34.78	15	65.22
Lincoln,	2	—	—	2	100.00
Second inspection,	30	11	36.67	19	63.33
Maynard,	2	—	—	2	100.00
Second inspection,	8	5	62.50	3	37.50
Scituate,	—	—	—	—	—
Second inspection,	1	1	100.00	—	—
Wilmington,	1	—	—	1	100.00
Second inspection,	17	9	52.94	8	47.06

Total number of dairies examined (including that in New Hampshire),	278
Number found to be free from objectionable conditions,	147
Number to which letters were sent,	131
Total number of conditions to which attention was called,	404
Percentage of dairies which passed inspection,	52.88

The names of the owners of dairies found to be worthy of commendation follow:—

Acton.

Acton Town Farm ¹	Harris, S. B. ²	Priest, Henry ²
Bradley, John ²	Jewett, J. S. ²	Proctor, Hiram W. P. ²
Cole, Abel ¹	Jones, Estate of E. H. ²	Reed, Moses A. ¹
Conant, Luther ¹	Manley, I. J. ²	Robbins, W. C. ¹
Coughlin, John F. ¹	Munroe, Dr. John C. ¹	Rudolph, W. H. ¹
DeSouza Bros. ¹	Oliver, Miss Susie ¹	Shapley, E. R. ¹
Farrar, H. A. ¹	Perkins, A. H. ²	Stevenson, John M. ¹
Forbush, Otis H. ²	Piper, Anson C. ²	Tuttle, James ²
Gould, H. A. ¹	Pratt, Frank ²	Whitcomb, F. S. ²
Hanson, Mrs. E. ²		

¹ Reported favorably on first inspection as well.

² Second inspection.

Bedford.

Bedford Town Farm ¹
 Elliott, James W. ²
 Fletcher, M.
 Gates, S. D. ¹
 Gray, E. E.
 Hansen, Olen ¹

Hooper, W. F. ¹
 Jenks, G. W. ¹
 Kendrick, Mrs. Lucy ²
 Meyers, Michael ¹
 Mortenson, Nelson ¹
 Parker, A. H. ¹

Pfeiffer, E. ¹
 Pickman, D. L. ¹
 Reid, J. H. ²
 Rooney, Patrick ²
 Spreadby, J. W. ¹
 Waite, C. M. ²

Carlisle.

Bickford, Floyd C. ²
 Biggi, A. ¹
 Blaisdell, B. F. ¹
 Bradley, J. J. ²
 Carlisle Town Farm ¹
 Clark, W. A. ²
 Davis, J. P. ¹
 Dawes, M.
 Duren, W. C. ²
 Dutton, H. P. ²

Fadden, Charles
 Forbush, Charles ²
 French, George E. ²
 Hall, J. B.
 Heald, George H.
 Hutchinson, C. ²
 Lamb, L. J. ²
 Lapham, Edward, Jr. ²
 Long, J. W. ³

Lovering, M. ²
 Mead, Dwight H. ²
 Nickles, A. P. ²
 Prescott, S. P. ²
 Robbins, D. W. ²
 Simeonson, Mrs. Anna ¹
 Wilkins, Frank ²
 Wilkins, George ¹
 Wilson, H. W. ¹

Cohasset.

Bates, O. H. ¹
 DeMello, A. C. ¹
 Lincoln, J. D. ²

Pratt, S. E. ²
 Spaulding, S. S. ¹
 Streight, C. B.

Warwick, L. ¹
 Wheelright, Frank W. ²
 Whitney, Hon. H. M. ¹

Concord.

Arnold, George B. ²
 Barry, Thomas E. ²
 Carlson, Fred ²
 Clark, Dana ²
 Clark, E. F. ²
 Cull, P. E. ²
 Dalton, P. ²
 Foss, William ²
 Helscher, M. O. ²
 Hodgman, George W. ²

Jones, A. C. H. ¹
 Jones, George E. ³
 Larsen, Andt. ²
 Lawrence, E. F. ²
 Mason, E. E. ²
 Mason, M. M. ²
 McGrath, P. ²
 McGurn, F. F. ²
 McManus, Daniel ²
 Mickleson, John ²

Paine, H. G. ²
 Patch, O. A. ²
 Pease, W. H. ²
 Peterson, Frank ²
 Peterson, R. ²
 Pope, Benjamin ¹
 Puffer, Alvin ²
 Tompkins, Lester ¹
 Tuttle, F. J. ²
 Wheeler, Henry C. ²

Lexington.

Bean, George O. ¹
 Cutler, Clarence H. ¹
 Kendall Bros. ¹

Kendall, Frank L. ¹
 Littlefield, A. S. ¹
 Munroe, James S. ²

Simonds, F. K. ²
 Swansen, Axel M. ²

Lincoln.

Barnes, Herbert C. ¹
 Blodgett, Dr. S. H. ²
 Blodgett, W. A. ²
 Cousins, George ¹

Cunningham Bros. ¹
 Dennie, George W. ¹
 Jaynes, C. P. ²
 Murphy, Michael ²

Smith, Charles S. ¹
 Wheeler, Charles ¹
 Wheeler, James ¹

Maynard.

Balcomb, A.
 Fowler, H. B. ²

Maynard, L. H. ¹
 Maynard Town Farm ²

Parmenter, W. ¹

*Scituate.*Litchfield, R.¹*Wilmington.*Buck, H.¹Gilbert, M. B.¹King, R.¹Byam, William ¹Hale, Walter ¹Perry, C. F.¹Foley, J. M.¹Hathaway, F. A.¹Wilmington Town Farm¹*New Hampshire.*

PLACE.	Number examined.	Number found to present no Objectionable Features.	Per Cent.	Number to which Letters were sent.	Per Cent.
Derry,	1	—	—	1	100.00

NEW LEGISLATION CONCERNING THE PROTECTION OF WATER SUPPLIES.

ACTS OF 1908, CHAPTER 499.

AN ACT TO PROVIDE FOR THE PROTECTION OF SOURCES OF WATER SUPPLY.

Be it enacted, etc., as follows:

SECTION 1. Cities, towns and fire districts duly established by legislative authority may, with the consent and approval of the state board of health, given after due notice and a hearing, take, or acquire by purchase or otherwise, and hold any lands, buildings, rights of way and easements within the watershed of any pond, stream, reservoir, well or other water used by them as a source of water supply, which said board may deem necessary to protect and preserve the purity of the water supply.

SECTION 2. If any lands, buildings, rights of way or easements are taken under authority hereof the city, town or fire district shall, within ninety days thereafter, file and cause to be recorded in the registry of deeds for the county or district in which the same are situated, a description thereof sufficiently accurate for identification, with a statement of the purpose for which the same are taken, signed by the water commissioners of said city, town or district. Upon the filing of said description and statement the title in fee simple to the lands, buildings, rights or easements so taken, shall vest in the city, town or district. All lands taken, purchased or otherwise acquired under the provisions of this act shall be under the control of the board of water commissioners of the city, town or district acquiring the same, who shall manage and improve them in such manner as they shall deem for the best interest of the city, town or district.

¹ Reported favorably on first inspection as well.

SECTION 3. Cities, towns and districts shall pay all damages sustained by any person or corporation by the taking of any lands, buildings, rights or easements under the authority of this act; and if the parties cannot agree upon the amount of the same, they may be recovered in the manner provided by law in the case of land taken for the laying out of highways: *provided*, that application therefor is made within three years after the said taking.

SECTION 4. All damages to be paid by a city, town or district by reason of any act done under the authority of this act may be paid out of the proceeds of the sale of any bonds authorized by law to be issued by such city, town or district for water supply purposes or from any surplus income of the water works available for the purpose.

SECTION 5. After the actual taking by a city, town or fire district of property in another city or town for the purposes of this act, the same may be valued by the assessors of the city or town in which such property is situated on the basis of the average of the assessed value of the land and buildings for the three years preceding the acquisition thereof, the valuation for each year being reduced by all abatements thereon; but any part of such land or buildings from which any revenue in the nature of rent is received shall be subject to taxation, and the city, town or fire district acquiring such property shall pay to the city or town in which it is situated taxes or sums in lieu of taxes at the rate per thousand of all taxes in such city or town for that year on the valuation so determined. Cases of dispute as to valuations arising under this act shall be governed by the provisions of sections eleven and twelve of chapter twelve of the Revised Laws, and of all amendments thereof now or hereafter made.

SECTION 6. All acts and parts of acts relating to the acquirement of lands by cities or towns for the protection of water supplies inconsistent herewith are hereby repealed.

SECTION 7. This act shall take effect upon its passage. [*Approved May 7, 1908.*]

ACTS OF 1908, CHAPTER 539.

AN ACT TO PROVIDE FOR THE BETTER PROTECTION OF THE DOMESTIC WATER SUPPLIES OF THE COMMONWEALTH.

Be it enacted, etc., as follows:

SECTION 1. Any police officer or constable of a city or town in which any pond, stream or reservoir used for the purpose of domestic water supply is wholly or partly situated, acting within the limits of his city or town, and any executive officer of a water board, board of water commissioners, public institution or water company, furnishing water for domestic purposes, or agent of such water board, board of water commissioners, public institution or water company, duly authorized in writing therefor by such boards, institution or company, acting upon the premises of such board, institution or company and not more than five rods from the water, for such supply may, without a warrant, arrest any person found in the act of bathing in a pond, stream or reservoir, the water of which is used for the purpose aforesaid,

and detain him in some convenient place until a complaint can be made against him therefor.

SECTION 2. This act shall take effect upon its passage. [*Approved May 26, 1908.*]

EXTENSION OF CEMETERIES.

ACTS OF 1908, CHAPTER 379.

AN ACT RELATIVE TO CEMETERIES.

Be it enacted, etc., as follows:

SECTION 1. Section thirty of chapter seventy-eight of the Revised Laws is hereby amended by inserting after the word "lies", in the fifth line, the words:—but no such permission shall be given until the location of the lands intended for such use has been approved in writing by the board of health of the city or town in which the lands are situated after notice to all persons interested and a hearing; and the board of health, upon approval of the use of any lands either for new cemeteries or for the extension of existing cemeteries, shall include a description of such lands sufficient for their identification in the records of the said board,—so as to read as follows:—*Section 30.* Except in the case of the erection or use of a tomb on private land for the exclusive use of the family of the owner, no land, other than that already so used or appropriated, shall be used for the purpose of burial, unless by permission of the town or of the mayor and aldermen of the city in which the same lies; but no such permission shall be given until the location of the lands intended for such use has been approved in writing by the board of health of the city or town in which the lands are situated after notice to all person interested and a hearing; and the board of health, upon approval of the use of any lands either for new cemeteries or for the extension of existing cemeteries, shall include a description of such lands sufficient for their identification in the records of the said board. For every interment in violation of the provisions of this section in a city or town in which the notice prescribed in the following section has been given, the owner of the land so used shall forfeit not less than twenty nor more than one hundred dollars.

SECTION 2. No land other than that so used and appropriated at the time of the passage of this act shall be used for the purpose of burial if it be so situated that surface water or ground drainage therefrom may enter any stream, pond, reservoir, well, filter gallery or other water used by a city, town or water company as a source of public water supply, or any tributary of a source so used, or any aqueduct or other works used in connection therewith, until a plan and description of the lands proposed for such use have been submitted to the state board of health and approved in writing by said board.

SECTION 3. Any person or corporation, including those persons or corporations in control of any public land, or the officers of any municipality,

who is or are aggrieved by the action of a board of health in approving the purchase, taking or use of any lands for cemetery purposes may, within sixty days, appeal from the order of said board to the state board of health, and said board may, after a hearing, rescind such order or may modify and amend the same by approving a part of the lands so proposed for such use and may approve the order as so modified and amended.

SECTION 4. This act shall take effect upon its passage. [*Approved April 10, 1908.*]

LAW AGAINST SO-CALLED LUNG TESTERS, ETC.

ACTS OF 1908, CHAPTER 381.

AN ACT RELATIVE TO THE USE BY THE PUBLIC OF MUTOSCOPES, LUNG TESTING MACHINES AND SIMILAR APPARATUS.

Be it enacted, etc., as follows:

SECTION 1. It shall be the duty of the proprietor or manager of any place of public amusement or other place in which there are provided for public use and entertainment mutoscopes or any other machine or apparatus of such nature that the person using the same breathes or speaks into it, or, for the purpose of seeing or hearing, holds any part thereof in contact with or near to his eyes or ears, to disinfect the same in such manner as shall be approved by the local board of health at least twice during such hours, in every twenty-four hours, as the machine or apparatus is offered for use by the public. This act shall not apply to telephones.

SECTION 2. It shall be unlawful to provide for public use or entertainment in any place of public amusement or other place of public resort any so-called lung testing machine or similar contrivance, the use of which requires the application of any part thereof to the lips.

SECTION 3. Whoever violates any provision of this act shall be punished by a fine of not more than twenty-five dollars for each offence. [*Approved April 10, 1908.*]

PROHIBITION OF OBJECTIONAL ADVERTISEMENTS.

ACTS OF 1908, CHAPTER 386.

AN ACT TO PROHIBIT THE DISSEMINATION BY ADVERTISEMENT OR OTHERWISE OF INFORMATION CONCERNING CERTAIN DISEASES.

Be it enacted, etc., as follows:

Whoever publishes, delivers, distributes or causes to be published, delivered, or distributed, an advertisement, statement or notice, other than a label which is attached to a bottle or package of medicine, or which is contained in a sealed package of medicine, describing the causes, symptoms, details or effects of a venereal disease, or of a disease, infirmity or condition of the sexual

organs, for the purpose of calling attention to or advertising a person or persons from whom, or an office or place at which, information, treatment, or advice may be obtained concerning such diseases or conditions, shall be punished by imprisonment for not more than six months or by a fine of not less than fifty nor more than five hundred dollars, or by both such fine and imprisonment. But the prohibitions of this act shall not be deemed to apply to the printing or delivering in sealed packages outside of this commonwealth of books, pamphlets, or circulars containing such advertisements; nor to newspapers printed outside of this commonwealth. [*Approved April 11, 1908.*]

FACTORY AND BUILDING INSPECTION.

ACTS OF 1908, CHAPTER 389.

AN ACT TO DEFINE THE POWERS AND DUTIES OF THE INSPECTORS OF FACTORIES AND PUBLIC BUILDINGS.

Be it enacted, etc., as follows:

SECTION 1. The chief of the district police, the deputy chief of the inspection department of the district police, and the inspectors of factories and public buildings may, in the performance of their duty in enforcing the laws of the commonwealth, enter any building, structure or enclosure, or any part thereof, and examine the methods of prevention of fire, means of exit, and means of protection against accident, and may make investigations as to the employment of children, young persons and women, except concerning health and the influence of occupation upon health. They may, except in the city of Boston, enter any public building, public or private institution, school-house, church, theatre, public hall, place of assemblage, or place of public resort, and make such investigations and order such structural or other changes, in said buildings, as are necessary relative to the construction, occupation and heating appliances and conditions, except for ventilating and sanitary purposes: *provided, however*, that they may order structural changes for any purpose whenever the necessity therefor has been reported in accordance with the provisions of section five of chapter five hundred and thirty-seven of the acts of the year nineteen hundred and seven.

SECTION 2. Any person who hinders or prevents or attempts to prevent any member of the inspection department of the district police from entering any building, structure or enclosure or part thereof specified in the preceding section shall be liable to a penalty of not less than fifty nor more than one hundred dollars.

SECTION 3. Trial justices, police, municipal and district courts shall have concurrent jurisdiction with the superior court to enforce the provisions of this act. [*Approved April 11, 1908.*]

INSPECTION OF PROVISIONS.

ACTS OF 1908, CHAPTER 411.

AN ACT RELATIVE TO THE INSPECTION OF MEAT AND PROVISIONS.

Be it enacted, etc., as follows:

SECTION 1. Section seventy of chapter fifty-six of the Revised Laws is hereby amended by inserting after the word "towns", in the first line, the words:—by themselves, their officers or agents,—so that the first sentence of said section as amended will read as follows:—Boards of health of cities and towns, by themselves, their officers or agents, may inspect the carcasses of all slaughtered animals and all meat, fish, vegetables, produce, fruit or provisions of any kind found in their cities or towns, and for such purpose may enter any building, enclosure or other place in which such carcasses or articles are stored, kept or exposed for sale.

SECTION 2. Section seventy-one of said chapter fifty-six is hereby amended by inserting after the word "health", in the first line, the words:—by themselves, their officers or agents,—so as to read as follows:—*Section 71.* The board of health, by themselves, their officers or agents, may inspect all veal found, offered or exposed for sale or kept with the intent to sell in its city or town and if, in its opinion, said veal is that of a calf less than four weeks old when killed, the board shall seize and destroy or dispose of it as provided in the preceding section, subject, however, to the provisions thereof relative to the disposal of money.

SECTION 3. Section seventy-two of said chapter fifty-six is hereby amended by inserting after the word "health", in the second line, the words:—its officers or agents,—and by inserting after the word "it", in the fourth line, the words:—or them,—so as to read as follows:—*Section 72.* Whoever prevents, obstructs or interferes with the board of health, its officers or agents, in the performance of its duties as provided herein, or hinders, obstructs or interferes with any inspection or examination by it or them, or whoever secretes or removes any carcass, meat, fish, vegetables, fruit or provisions of any kind, for the purpose of preventing the same from being inspected or examined under the provisions of sections seventy to seventy-six, inclusive, shall be punished by a fine of not more than one hundred dollars or by imprisonment for not more than sixty days, or by both such fine and imprisonment.

SECTION 4. This act shall take effect upon its passage. [*Approved April 17, 1908.*]

MISUSE OF MILK VESSELS.

ACTS OF 1908, CHAPTER 435.

AN ACT RELATIVE TO VESSELS USED IN THE SALE OF MILK.

Be it enacted, etc., as follows:

SECTION 1. Chapter one hundred and sixteen of the acts of the year nineteen hundred and six is hereby amended by striking out section three and inserting in place thereof the following:—*Section 3.* Every licensed milk dealer who sells, or has in his possession with intent to sell, milk not contained in clean vessels bearing his own name, or the name under which his business is conducted, and bearing no other name, shall be punished by a fine of ten dollars for each offence; but the provisions of this section shall not apply to persons using clean vessels bearing the name of another person whose written permission for such use shall have been obtained previously and registered in the office of the milk inspector, in municipalities having such officer, and in other municipalities registered in the office of the city or town clerk.

SECTION 2. Section four of said chapter one hundred and sixteen is hereby repealed. [*Approved April 22, 1908.*]

HEATED MILK MUST BE MARKED.

ACTS OF 1908, CHAPTER 570.

AN ACT TO PROVIDE FOR THE PROPER MARKING OF HEATED MILK.

Be it enacted, etc., as follows:

SECTION 1. Whoever, himself or by his servant or agent, or as the servant or agent of any person, firm or corporation, sells, exchanges or delivers or has in his custody or possession with intent to sell, exchange or deliver any milk which has been subjected to artificial heat greater than one hundred and sixty-seven degrees Fahrenheit, not having the words "heated milk" distinctly marked upon a light ground in plain black uncondensed gothic letters at least one inch in length in a conspicuous place upon every vessel, can or package from or in which such milk is, or is intended to be, sold, exchanged or delivered shall for a first offence be punished by a fine of not less than fifty nor more than two hundred dollars, for a second offence by a fine of not less than one hundred nor more than three hundred dollars, and for a subsequent offence by a fine of fifty dollars and by imprisonment for not less than sixty nor more than ninety days. If such vessel, can or package is of the capacity of not more than two quarts, said words may be placed

upon a detachable label or tag attached thereto and said letters may be less than one inch in length, but not smaller than brevier gothic capital letters.

SECTION 2. Nothing in this act shall be construed as applying to condensed milk or to milk which has been concentrated to one half its volume or less.
[*Approved June 1, 1908.*]

THE NEW MILK STANDARD.

ACTS OF 1908, CHAPTER 643.

AN ACT TO ESTABLISH THE STANDARD OF MILK.

Be it enacted, etc., as follows:

Chapter fifty-six of the Revised Laws is hereby amended by striking out section fifty-six and inserting in place thereof the following:—*Section 56.* In prosecutions under the provisions of sections fifty-one to sixty-four, inclusive, milk which, upon analysis, is shown to contain less than twelve and fifteen hundredths per cent of milk solids or less than three and thirty-five hundredths per cent of fat, shall not be considered of good standard quality.
[*Approved June 13, 1908.*]

MONTHLY BULLETIN

OF THE

STATE BOARD OF HEALTH

OF

MASSACHUSETTS.

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JULY, 1908.

Vol. 3. No. 7.

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STATE BOARD OF HEALTH.

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BOSTON
WRIGHT & POTTER PRINTING CO., STATE PRINTERS
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1908

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WEEKLY RETURNS OF DEATHS FROM CITIES AND TOWNS OF MORE THAN 10,000 POPULATION.

WEEK ENDING JULY 4, 1908.

CITIES AND TOWNS.	Population, ¹ estimated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	617,082	196	56	61	19	19	4	3	5
Worcester,	134,341	40	13	10	3	3	1	-	-
Fall River,	106,305	63	39	-	-	-	-	-	-
Cambridge,	100,922	23	4	9	2	3	-	-	-
Lowell,	96,380	44	18	11	6	1	-	-	-
Lynn,	82,661	17	2	3	-	3	-	-	-
New Bedford,	82,580	27	12	9	-	-	-	-	-
Springfield,	81,425	18	5	6	-	2	-	-	-
Lawrence,	78,000	18	7	6	-	3	-	-	-
Somerville,	74,295	19	6	8	4	2	1	-	-
Brockton,	53,131	6	1	1	-	1	-	-	-
Holyoke,	52,652	12	8	4	-	1	-	-	-
Malden,	40,929	16	2	4	2	1	-	-	-
Chelsea,	39,363	7	2	1	-	-	-	1	-
Newton,	38,919	9	1	2	-	1	-	-	-
Salem,	38,666	10	2	1	-	-	1	-	-
Haverhill,	38,228	16	3	-	-	-	-	-	-
Fitchburg,	33,948	7	3	2	-	1	-	1	-
Everett,	32,415	6	1	-	-	-	-	-	-
Taunton,	30,967	8	1	4	2	2	-	-	-
Quincy,	30,924	4	2	-	-	-	-	-	-
Waltham,	28,120	4	-	-	-	-	-	-	-
Pittsfield,	27,168	4	2	-	-	-	-	-	-
Gloucester,	26,011	4	2	-	-	-	-	-	-
Brookline,	25,825	5	-	-	-	-	-	-	-
North Adams,	22,150	4	3	-	-	-	-	-	-
Chicopee,	20,831	14	6	2	-	-	-	-	-
Northampton,	20,789	2	0	-	-	-	-	-	-
Medford,	20,605	3	-	1	-	1	-	-	-
Beverly,	16,088	7	1	-	-	-	-	-	-
Leominster,	15,578	2	-	-	-	-	-	-	-
Hyde Park,	15,327	5	0	1	-	1	-	-	-
Melrose,	15,160	0	-	-	-	-	-	-	-
Newburyport,	14,794	-	-	-	-	-	-	-	-
Woburn,	14,492	1	-	-	-	-	-	-	-
Westfield,	14,457	1	-	-	-	-	-	-	-
Marlborough,	14,359	4	0	1	-	1	-	-	-
Revere,	14,248	2	-	1	-	1	-	-	-
Attleborough,	13,600	3	0	-	-	-	-	-	-
Peabody,	14,144	-	-	-	-	-	-	-	-
Adams,	13,375	2	2	-	-	-	-	-	-
Clinton,	13,105	-	-	-	-	-	-	-	-
Gardner,	12,794	1	1	1	-	-	-	-	-
Milford,	12,565	-	-	-	-	-	-	-	-
Watertown,	12,306	4	1	1	1	-	-	-	-
Plymouth,	12,149	-	-	-	-	-	-	-	-
Weymouth,	11,744	4	0	-	-	-	-	-	-
Framingham,	11,698	2	1	-	-	-	-	-	-
Southbridge,	11,630	1	-	1	-	1	-	-	-
Wakefield,	10,903	-	-	-	-	-	-	-	-
Webster,	10,825	-	-	-	-	-	-	-	-
Arlington,	10,307	0	-	-	-	-	-	-	-

Recapitulation.

Total of reporting towns, . . .	2,292,795	645	207	151	39	48	7	5	5
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¹ The populations were estimated upon the rate of growth from 1900 to 1905. Those of Taunton, Gloucester, North Adams and Clinton were allowed to stand as in 1905, having shown no increase during the five-year period. The gain in the population of Lowell is due to the annexation of a part of the town of Tewksbury. The population of Lawrence by the census of 1905 was 70,050, but, owing to the building of the new Wood and Arlington mills, employing at present some 3,000 operatives, an increase of about 8,000 is estimated by the Lawrence board of health, or 78,000.

WEEK ENDING JULY 11, 1908.

CITIES AND TOWNS.	Population. Esti- mated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —						
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.	
Boston,	617,082	209	74	68	8	22	6	—	7	
Worcester,	134,341	37	17	8	1	—	—	—	—	
Fall River,	106,305	61	22	43	1	1	—	—	1	
Cambridge,	100,922	19	7	8	2	1	1	—	—	
Lowell,	96,380	45	27	21	2	3	—	—	—	
Lynn,	82,661	18	5	3	—	1	1	—	—	
New Bedford,	82,580	29	20	13	1	1	—	1	—	
Springfield,	81,425	14	7	3	1	—	—	—	—	
Lawrence,	78,000	24	11	14	—	1	1	1	—	
Somerville,	74,295	16	4	4	—	1	—	—	1	
Brockton,	53,131	5	—	1	—	1	—	—	—	
Holyoke,	52,652	18	11	10	1	1	—	1	—	
Malden,	40,929	8	4	—	—	—	—	—	—	
Chelsea,	39,363	2	2	—	—	—	—	—	—	
Newton,	38,919	7	3	—	—	—	—	—	—	
Salem,	38,666	25	15	1	—	1	—	—	—	
Haverhill,	38,228	0	—	—	—	—	—	—	—	
Fitchburg,	33,948	8	3	2	1	1	—	—	—	
Everett,	32,415	4	1	—	—	—	—	—	—	
Taunton,	30,967	7	2	2	—	—	—	—	—	
Quincy,	30,924	9	4	—	—	—	—	—	—	
Waltham,	28,120	3	—	—	—	—	—	—	—	
Pittsfield,	27,168	9	2	3	1	—	—	—	—	
Gloucester,	26,011	3	1	—	—	—	—	—	—	
Brookline,	25,825	5	—	1	1	—	—	—	—	
North Adams,	22,150	9	1	2	—	2	—	—	—	
Chicopee,	20,831	7	4	1	—	1	—	—	—	
Northampton,	20,789	1	0	—	—	—	—	—	—	
Medford,	20,605	5	1	2	—	2	—	—	—	
Beverly,	16,088	3	2	1	—	—	—	—	—	
Leominster,	15,578	5	1	—	—	—	—	—	—	
Hyde Park,	15,327	4	0	—	—	—	—	—	—	
Melrose,	15,160	2	1	—	—	—	—	—	—	
Newburyport,	14,794	—	—	—	—	—	—	—	—	
Woburn,	14,492	3	1	—	—	—	—	—	—	
Westfield,	14,457	3	—	—	—	—	—	—	—	
Marlborough,	14,359	5	0	1	—	1	—	—	—	
Revere,	14,248	4	1	2	2	—	—	—	—	
Attleborough,	13,600	5	1	1	—	1	—	—	—	
Peabody,	14,144	—	—	—	—	—	—	—	—	
Adams,	13,375	6	2	1	—	1	—	—	—	
Clinton,	13,105	2	1	—	—	—	—	—	—	
Gardner,	12,794	3	1	1	—	1	—	—	—	
Milford,	12,565	2	1	—	—	—	—	—	—	
Watertown,	12,306	0	—	—	—	—	—	—	—	
Plymouth,	12,149	—	—	—	—	—	—	—	—	
Weymouth,	11,744	4	0	—	—	—	—	—	—	
Framingham,	11,698	1	—	—	—	—	—	—	—	
Southbridge,	11,630	—	—	—	—	—	—	—	—	
Wakefield,	10,903	—	—	—	—	—	—	—	—	
Webster,	10,825	—	—	—	—	—	—	—	—	
Arlington,	10,307	0	—	—	—	—	—	—	—	

Recapitulation.

Total of reporting towns, .	2,306,835	659	260	217	22	44	9	3	9
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WEEK ENDING JULY 18, 1908.

CITIES AND TOWNS.	Population. Esti- mated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —						
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.	
Boston,	617,082	212	84	74	9	24	2	2	1	
Worcester,	134,341	35	12	12	2	4	-	-	-	
Fall River,	106,305	67	53	43	1	1	-	-	-	
Cambridge,	100,922	25	11	12	2	3	1	-	-	
Lowell,	96,380	37	24	19	3	1	-	2	-	
Lynn,	82,661	16	7	-	-	-	-	-	-	
New Bedford,	82,580	28	23	17	-	-	-	-	-	
Springfield,	81,425	21	6	6	-	3	-	-	-	
Lawrence,	78,000	39	23	22	-	7	-	-	-	
Somerville,	74,295	10	3	3	1	2	-	-	-	
Brockton,	53,131	6	2	-	-	-	-	-	-	
Holyoke,	52,652	16	14	11	-	1	1	-	-	
Malden,	40,929	11	2	3	-	1	-	1	-	
Chelsea,	39,363	6	1	2	-	2	-	-	-	
Newton,	38,919	7	-	5	2	1	-	-	-	
Salem,	38,666	16	11	8	-	2	-	-	-	
Haverhill,	38,228	11	3	1	1	-	-	-	-	
Fitchburg,	33,948	12	3	3	-	2	1	-	-	
Everett,	32,415	4	4	-	-	-	-	-	-	
Taunton,	30,967	11	3	5	1	1	-	-	-	
Quincy,	30,924	8	0	-	-	-	-	-	-	
Waltham,	28,120	10	1	5	-	2	-	2	-	
Pittsfield,	27,168	7	2	2	-	1	-	-	-	
Gloucester,	26,011	4	3	-	-	-	-	-	-	
Brookline,	25,825	2	1	-	-	-	-	-	-	
North Adams,	22,150	8	-	1	1	-	-	-	-	
Chicopee,	20,831	4	3	-	-	-	-	-	-	
Northampton,	20,789	5	1	-	-	-	-	-	-	
Medford,	20,605	5	2	3	-	1	-	-	-	
Beverly,	16,088	2	-	-	-	-	-	-	-	
Leominster,	15,578	1	-	-	-	-	-	-	-	
Hyde Park,	15,327	7	3	2	-	-	-	-	-	
Melrose,	15,160	0	-	-	-	-	-	-	-	
Newburyport,	14,794	-	-	-	-	-	-	-	-	
Woburn,	14,492	6	1	-	-	-	-	-	-	
Westfield,	14,457	3	1	1	1	-	-	-	-	
Marlborough,	14,359	4	0	-	-	-	-	-	-	
Revere,	14,248	1	-	1	-	1	-	-	-	
Attleborough,	13,600	3	2	1	-	1	-	-	-	
Peabody,	14,144	-	-	-	-	-	-	-	-	
Adams,	13,375	2	2	-	-	-	-	-	-	
Clinton,	13,105	1	0	-	-	-	-	-	-	
Gardner,	12,794	1	-	-	-	-	-	-	-	
Milford,	12,565	5	3	3	-	-	-	-	-	
Watertown,	12,306	2	2	-	-	-	-	-	-	
Plymouth,	12,149	-	-	-	-	-	-	-	-	
Weymouth,	11,744	0	-	-	-	-	-	-	-	
Framingham,	11,698	2	-	-	-	-	-	-	-	
Southbridge,	11,630	1	-	-	-	-	-	-	-	
Wakefield,	10,903	-	-	-	-	-	-	-	-	
Webster,	10,825	-	-	-	-	-	-	-	-	
Arlington,	10,307	3	3	-	-	-	-	-	-	

Recapitulation.

Total of reporting towns,	2,318,465	687	319	265	24	61	5	7	1
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WEEK ENDING JULY 25, 1908.

CITIES AND TOWNS.	Population. Estimated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —						
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.	
Boston,	617,082	227	103	90	15	14	5	4	2	
Worcester,	134,341	45	16	15	1	4	1	—	—	
Fall River,	106,305	46	33	25	1	—	—	—	—	
Cambridge,	100,922	30	6	9	—	3	1	—	—	
Lowell,	96,380	47	27	19	—	5	—	1	—	
Lynn,	82,661	22	10	2	—	1	—	—	—	
New Bedford,	82,580	35	15	17	—	5	—	1	—	
Springfield,	81,425	21	10	8	1	—	—	2	—	
Lawrence,	78,000	29	21	18	1	—	—	—	—	
Somerville,	74,295	18	10	6	2	—	—	1	—	
Brockton,	53,131	13	5	4	—	—	1	1	—	
Holyoke,	52,652	26	18	17	1	4	—	—	—	
Malden,	40,929	9	2	4	1	2	—	—	—	
Chelsea,	39,363	3	1	—	—	—	—	—	—	
Newton,	38,919	9	4	2	—	1	1	—	—	
Salem,	38,666	24	—	5	—	1	—	1	—	
Haverhill,	38,228	9	5	4	—	1	—	—	—	
Fitchburg,	33,948	9	5	—	—	—	—	—	—	
Everett,	32,415	7	3	1	—	1	—	—	—	
Taunton,	30,967	14	5	5	—	2	—	—	—	
Quincy,	30,924	5	3	—	—	—	—	—	—	
Waltham,	28,120	7	1	1	—	1	—	—	—	
Pittsfield,	27,168	6	2	2	1	—	—	—	—	
Gloucester,	26,011	4	2	1	—	—	—	—	—	
Brookline,	25,825	3	—	—	—	—	—	—	—	
North Adams,	22,150	2	—	—	—	—	—	—	—	
Chicopee,	20,831	12	9	2	—	1	—	—	—	
Northampton,	20,789	6	4	—	—	—	—	—	—	
Medford,	20,605	4	2	3	—	1	—	—	—	
Beverly,	16,088	2	—	—	—	—	—	—	—	
Leominster,	15,578	—	—	—	—	—	—	—	—	
Hyde Park,	15,327	1	1	1	—	—	—	—	—	
Melrose,	15,160	3	1	—	—	—	—	—	—	
Newburyport,	14,794	—	—	—	—	—	—	—	—	
Woburn,	14,492	4	0	—	—	—	—	—	—	
Westfield,	14,457	5	1	—	—	—	—	—	—	
Marlborough,	14,359	4	0	1	—	1	—	—	—	
Revere,	14,248	3	1	1	—	—	—	—	—	
Attleborough,	13,600	2	2	1	—	—	—	—	—	
Peabody,	14,144	—	—	—	—	—	—	—	—	
Adams,	13,375	—	—	—	—	—	—	—	—	
Clinton,	13,105	1	0	—	—	—	—	—	—	
Gardner,	12,794	1	—	1	—	1	—	—	—	
Milford,	12,565	—	—	—	—	—	—	—	—	
Watertown,	12,306	2	—	2	1	—	—	—	—	
Plymouth,	12,149	—	—	—	—	—	—	—	—	
Weymouth,	11,744	4	2	2	—	—	—	—	—	
Framingham,	11,698	5	3	—	—	—	—	—	—	
Southbridge,	11,630	3	2	—	—	—	—	—	—	
Wakefield,	10,903	—	—	—	—	—	—	—	—	
Webster,	10,825	—	—	—	—	—	—	—	—	
Arlington,	10,307	4	—	1	—	1	—	—	—	

Recapitulation.

Total of reporting towns,	2,289,512	736	335	260	25	50	9	11	2
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**WEEKLY RETURNS OF DEATHS FROM CERTAIN INFECTIOUS
DISEASES.**

DEATHS FROM INFECTIOUS DISEASES NOT SPECIFICALLY MENTIONED IN
ABOVE TABLES DURING THE WEEKS OF JULY 4, 11, 18 AND 25, 1908.

DISEASE.	Place.	WEEK ENDING—			
		July 4.	July 11.	July 18.	July 25.
Cerebro-spinal meningitis, .	Boston, . . .	1	—	—	—
	Cambridge, . . .	—	1	—	1
	Newton, . . .	—	—	1	—
	Weymouth, . . .	—	—	—	1
	Worcester, . . .	2	1	—	1
Erysipelas,	Boston,	1	—	1	1
Scarlet fever,	Boston,	3	1	4	1
	Cambridge,	—	1	—	1
	Fall River,	—	—	—	1
	Gloucester,	—	—	—	1
	New Bedford,	1	—	—	—
	Springfield,	1	—	—	1
	Taunton,	—	—	1	—
Whooping cough,	Beverly,	—	1	—	—
	Boston,	3	2	4	3
	Cambridge,	1	2	—	—
	Chicopee,	1	—	—	—
	Lawrence,	1	1	—	—
	Lowell,	1	—	—	—
	Lynn,	—	—	—	1
	Newton,	1	—	—	—
	Somerville,	—	1	—	—
Tubercular meningitis, . . .	Taunton,	—	1	—	—
	Lynn,	1	—	—	—
Tetanus,	Malden,	—	—	—	—
	Fitchburg,	1	—	—	—

WEEKLY RETURNS OF CASES OF INFECTIOUS DISEASES.

CASES OF INFECTIOUS DISEASES REPORTED DURING THE WEEKS OF JULY
4, 11, 18 AND 25, 1908.

[Under the provisions of section 52 of chapter 75 of the Revised Laws.]

	WEEK ENDING —			
	July 4.	July 11.	July 18.	July 25.
Diphtheria,	100	117	120	104
Measles,	286	264	149	109
Scarlet fever,	69	58	41	53
Typhoid fever,	46	49	49	78
Tuberculosis, pulmonary,	98	94	112	177
Tuberculosis, other than pulmonary,	—	—	—	1
Cerebro-spinal meningitis,	4	3	—	5
Whooping cough,	15	7	23	69
Varicella,	3	1	7	5
Tetanus,	2	1	—	2
Ophthalmia neonatorum,	1	—	—	1
Mumps,	—	—	—	1
Actinomycosis,	—	—	—	1
Malignant pustule,	—	—	—	1

MONTHLY REPORT ON INSPECTION OF FOOD AND DRUGS.

The following summary presents the results of the examination of food and drugs made by the State Board of Health during the month of July, 1908: —

ARTICLES EXAMINED.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.	ARTICLES EXAMINED.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.
Butter,	9	—	9	Meat products —			
Canned fruit and vegetables,	10	—	10	Continued: —			
Cheese,	2	—	2	Hamburg steak,	—	2	2
Cider,	1	1	2	Lambs' tongues,	2	—	2
Coffee,	1	—	1	Sausages,	12	—	12
Condensed milk,	5	1	6	Milk,	255	146	401
Cream,	7	—	7	Pickles,	6	—	6
Drugs,	103	9	112	Proprietary foods,	—	5	5
Flavoring extracts,	9	2	11	Salad dressing,	2	—	2
Grape juice,	2	1	3	Shrimps,	2	—	2
Honey,	1	—	1	Spices,	6	—	6
Jams and jellies,	2	—	2	Syrups,	2	—	2
Maple sugar,	1	—	1	Table sauces,	3	—	3
Meat products:—				Vinegar,	7	1	8
Canned meats,	2	—	2	Total,	452	168	620

The samples of drugs found to be adulterated were: gin, lime water, olive oil, peroxide of hydrogen, tincture of iodine, and several proprietary medicines.

The cities and towns in which samples were collected were: Andover, Arlington, Beverly, Billerica, Boston, Brockton, Brookline, Burlington, Cambridge, Canton, Chelsea, Dartmouth, Everett, Fall River, Gloucester, Haverhill, Lawrence, Lowell, Lynn, Malden, Melrose, Methuen, Medford, Peabody, Plymouth, Quincy, Revere, Rockport, Salem, Saugus, Somerville, Stoneham, Winchester, Winthrop, Woburn and Worcester.

PROSECUTIONS FOR VIOLATIONS OF THE LAW RELATING TO FOOD AND DRUGS.

Forty-eight convictions were secured during the month of July, 1908, for selling adulterated food and drugs and preparations containing cocaine, as follows:—

No.	Name of Defendant.	Place.	Character of Article sold.
1	Joseph B. Thornton, . . .	Lowell, . . .	Cider (contained benzoic acid).
2	Edney A. Lapham, . . .	New Bedford, .	Cider (contained salicylic acid).
3	Thomas Davies, . . .	Boston, . . .	Cocaine hydrochloride. ¹
4	Thomas Davies, . . .	Boston, . . .	Cocaine hydrochloride. ¹
5	Thomas Davies, . . .	Boston, . . .	Cocaine hydrochloride.
6	Thomas Davies, . . .	Boston, . . .	Cocaine hydrochloride.
7	John F. Kershaw, . . .	Boston, . . .	Cocaine hydrochloride.
8	John F. Kershaw, . . .	Boston, . . .	Cocaine hydrochloride.
9	Scott & McCobb, . . .	Boston, . . .	Cocaine hydrochloride.
10	Ferdinand E. Sage, . . .	Boston, . . .	Coffee extract (contained benzoic acid).
11	Udelpha V. Sage, . . .	Boston, . . .	Coffee extract (contained benzoic acid).
12	W. Edgar Carter (manager Hammond Co.).	Lynn, . . .	Hamburg steak (contained sodium sulphate).
13	Arthur Peel, . . .	Lawrence, . . .	Hamburg steak (contained sodium sulphate).
14	Anastos Anastos, . . .	Boston, . . .	Maple sugar (40 per cent. maple).
15	George Zeviter, . . .	Boston, . . .	Maple sugar (35 per cent. maple).
16	Harry Barbarian, . . .	Cambridge, . . .	Milk (total solids, 10.42). ²
17	Whitney G. Brigham, ³ . . .	Hudson, . . .	Milk (total solids, 11.23).
18	Nellie Burns, . . .	Saugus, . . .	Milk (total solids, 11.63). ¹
19	Patrick F. Collins, . . .	Lynn, . . .	Milk (total solids, 11.60).
20	Archibald E. Como, . . .	Essex, . . .	Milk (total solids, 11.60). ¹
21	Thomas A. Dewire, . . .	Cambridge, . . .	Milk (total solids, 11.60). ¹
22	Joseph Denault, . . .	Lowell, . . .	Milk (total solids, 11.68).
23	George W. Dinsmore, ³ . . .	Burlington, . . .	Milk (total solids, 10.00).
24	Sarkes Davragin, . . .	Methuen, . . .	Milk (total solids, 10.60). ⁴
25	Albert H. Friend, . . .	Gloucester, . . .	Milk (total solids, 11.40). ¹

¹ Appealed.² Second offence.³ Producer.⁴ Watered

No.	Name of Defendant.	Place.	Character of Article sold.
26	Albert H. Friend,	Gloucester, . . .	Milk (total solids, 11.60). ¹
27	Elijah Hodiran,	Malden,	Milk (total solids, 10.88).
28	James Hoy, ²	Swansea,	Milk (total solids, 11.47).
29	Otis C. Haven, ²	Burlington, . . .	Milk (total solids, 5.60). ^{1, 3}
30	Otis C. Haven, ²	Burlington, . . .	Milk (total solids, 6.70). ^{1, 3}
31	Walter B. Jourdan, ²	Westborough, . .	Milk (total solids, 10.70).
32	Albert E. Kenneson, ²	Woburn,	Milk (total solids, 10.08). ³
33	Albert E. Kenneson, ²	Woburn,	Milk (total solids, 11.68).
34	Thomas F. Larrabee,	Danvers,	Milk (total solids, 11.38).
35	Frank A. Melvin,	Hudson,	Milk (total solids, 11.36).
36	John G. Nutton, ²	Gloucester, . . .	Milk (total solids, 11.60). ¹
37	Chas. E. O'Brien,	Burlington, . . .	Milk (total solids, 11.20).
38	Geo. W. Pierce,	Danvers,	Milk (total solids, 9.60). ^{4, 1, 3}
39	Frank J. Rooney, ²	Hudson,	Milk (total solids, 11.63).
40	Napoleon F. Roy,	Methuen,	Milk (total solids, 11.33).
41	Samuel Schwalb,	Chelsea,	Milk (total solids, 10.80).
42	George W. Smith, ²	Wakefield,	Milk (total solids, 10.08). ³
43	Arthur St. Lawrent,	Fall River, . . .	Milk (total solids, 11.20).
44	Frank C. Vieria, ²	Westport,	Milk (total solids, 11.60).
45	William E. Williams,	Amesbury,	Milk (total solids, 11.37).
46	William Younger, ²	Gloucester, . . .	Milk (total solids, 10.87).
47	John M. Deane,	Fall River, . . .	Raspberry extract.
48	John M. Deane,	Fall River, . . .	Strawberry extract.

¹ Appealed.² Producer.³ Watered.⁴ Second offence.

Fines imposed, \$1,241.

LIST OF ADULTERATED OR IMPROPERLY LABELLED FOODS, ETC., FOR JULY, 1908.

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
-	Sarsaparilla Tonic,	. . . . .	Contained saccharin.
-	Blood Orange Tonic,	. . . . .	Contained saccharin.
8070 M	"Manx" Brand Condensed Milk, . .	Wayne County Condensed Milk Company, Ontario Centre, N. Y.,	Condensed skimmed milk; fat in original milk, 2.78 per cent.
8300 M	Double Concentrated Extract of Strawberry,	Oliver Johnson & Co., Providence, R. I.,	Artificial extract; not true to name.
8302 M	Raspberry,	Oliver Johnson & Co., Providence, R. I.,	Artificial extract; not true to name.
8058	Hire's Ginger Ale Extract,	Chas. E. Hire's Company, Malvern and Philadelphia, Pa.,	Contained 16.3 per cent. alcohol; not stated on label.
2827 P	Indian Root Beer Extract,	Baker Extract Company, Portland, Me., and Springfield, Mass.,	Contained 10.64 per cent. alcohol; not stated on label.
2833 P	Dr. Swett's Root Beer Extract,	Dr. Swett Root Beer Extract Company, Boston, Mass.,	Contained 11.70 per cent. alcohol; not stated on label.
2835 P	Bryant's Root Beer Extract,	Michigan Drug Company, Detroit, Mich.,	Contained 5.44 per cent. alcohol; not stated on label.
8057	Hydrogen Peroxide "U. S. P.,"	Grindle & Gomperts, Boston, Mass.,	56.3 per cent. U. S. P. strength.
8208 M	Olive oil,	Frank E. Shea Company, Boston, Mass.,	Contained cotton-seed oil.
7604	Hale's Asthma Cure, . .	. . . . .	Contained 6.63 per cent. alcohol.
8282 M	Cundall's Neutralizing Cordial,	C. B. Cundall & Co., New Bedford, Mass.,	0.45 grain morphine per fluid ounce; not stated on label.
8284 M	Lime water,	John M. Deane, Fall River, Mass.,	68 per cent U. S. P. strength.
2541 P	Milk,	Albert E. Kenneson, Woburn, Mass.,	Total solids 10.08 per cent.; contained added water.
8012	Milk,	David T. Ray, Haverhill, Mass.,	Total solids 8.60 per cent.; contained added water.
2573 P	Milk, . . . . .	. . . . .	Total solids 5.60 per cent.; contained added water.
2575 P	Milk, . . . . .	. . . . .	Total solids 8.40 per cent.; contained added water.
2581 P	Milk, . . . . .	. . . . .	Total solids 8.32 per cent.; contained added water.
2593 P	Milk, . . . . .	. . . . .	Total solids 9.34 per cent.; contained added water.
2595 P	Milk,	Otis C. Haven, ¹ Burlington, Mass.,	Total solids 6.70 per cent.; contained added water.
2597 P	Milk, . . . . .	. . . . .	Total solids 9.00 per cent.; contained added water.
2599 P	Milk, . . . . .	. . . . .	Total solids 11.58 per cent.; contained added water.

LIST OF ADULTERATED OR IMPROPERLY LABELLED FOODS, ETC. — *Concluded.*

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
q-750	Milk,	Sarkes Davragin, ¹ Methuen, Mass.,	Total solids 10.60 per cent.; contained added water.
8051	Milk,	William H. Evans, Rockport, Mass.,	Total solids 9.49 per cent.; contained added water.
8334 M	Milk,	Edward C. Burnett, Lynn, Mass.,	Total solids 8.08 per cent.; contained added water.
8346 M	Milk,	William H. McCarthy, Lynn, Mass.,	Total solids 10.00 per cent.; contained added water.
q-752	Milk,	Joseph McLaughlin, Lynn, Mass.,	Total solids 10.00 per cent.; contained added water.
q-753	Milk,	John Foster, Lynn, Mass.,	Total solids 8.72 per cent.; contained added water.
q-754	Milk,	Rawdon Macnamara, Lynn, Mass.,	Total solids 8.50 per cent.; contained added water.
q-811	Milk,	William E. Daly, ¹ Braintree, Mass.,	Total solids 10.80 per cent.; contained added water.
2559 P	Milk,	Amos C. Towle, Saugus, Mass.,	Total solids 11.34 per cent.; contained added water.
2561 P	Milk,	Herbert E. Brier, Saugus, Mass.,	Total solids 10.02 per cent.; fat, 1.80 per cent.; skimmed milk.
2569 P	Milk,	John Walkey, Saugus, Mass.,	Total solids 10.72 per cent.; fat, 2.20 per cent.; skimmed milk.
2703 P	Milk,	Howard R. Le Favour, ¹ Beverly, Mass.,	Total solids 11.80 per cent.; preserved with formaldehyde.
7985	Milk,	Edward C. Poole, Rockport, Mass.,	Total solids 10.82 per cent.; fat, 2.10 per cent.; skimmed milk.
8238 M	Milk,	Harry Barbarian, Cambridge, Mass.,	Total solids 10.42 per cent.; fat, 2.15 per cent.; skimmed milk.

¹ Producer.

INSPECTION OF DAIRIES.

During the month of July, 1908, 242 dairies were examined in the following places:

PLACE.	Number examined.	Number found to present no Objectionable Features.	Per Cent.	Number to which Letters were sent.	Per Cent.
Acton,	1	—	—	1	100.00
Arlington,	1	—	—	1	100.00
Second inspection,	8	4	50.00	4	50.00
Third inspection,	1	—	—	1	100.00
Boxborough,	2	1	50.00	1	50.00
Second inspection,	32	11	34.37	21	65.63
Concord,	2	2	100.00	—	—
Second inspection,	4	3	75.00	1	25.00
Third inspection,	7	—	—	7	100.00
Fourth inspection,	1	—	—	1	100.00
Hull,	13	8	61.54	5	38.46
Littleton,	3	1	33.33	2	66.67
Second inspection,	56	23	41.07	33	58.93
Stow,	3	1	33.33	2	66.67
Second inspection,	24	12	50.00	12	50.00
Sudbury,	1	—	—	1	100.00
Second inspection,	51	30	58.82	21	41.18
Wayland,	2	1	50.00	1	50.00
Second inspection,	30	17	56.67	13	43.33

Total number of dairies examined,	242
Number found to be free from objectionable conditions,	114
Number to which letters were sent,	128
Total number of conditions to which attention was called,	482
Percentage of dairies which passed inspection,	47.11

The names of the owners of dairies found to be worthy of commendation follow:—

Arlington.

Boles, Mrs. Dolly ¹	Lynch, Mrs. T. ¹	Murray, Robert ¹
Hourty, Patrick ²		

Boxborough.

Ball, F. H. ²	Dudley, C. A. ²	Littlefield, A. ²
Cobleigh, J. R. ²	Griffin, Jeremiah ²	Parker, Edward
Cunningham, P. W. ¹	Griffin, Mrs. John ²	Wetherbee, S. N. ²
Cunningham, W. E. ²	Lawrence, Austin ²	Whitcomb, J. H. ²

Concord.

Alger, Joseph	Pearce, Frank	Toomey, J. A. ²
Jewett, L. F. ²	Russell, James ²	

Hull.

Cobb, Walter	Hatchard, George	Stearns, R. H.
Damon, L., Son & Co.	Knights, C. W.	Vining, Miss Floretta
Hall, Col. G. T.	Richards, W. S.	

¹ Reported favorably on first inspection as well.

² Second inspection.

Littleton.

Brown, Marshall ¹
 Cash, G. H.²
 Cook, George A.¹
 Flagg, Clifton E.¹
 Flagg, C. V.¹
 Flagg, E. A.²
 Harwood, H. J.²
 Houghton, D. G.²

Kimball, Austin ²
 Kimball, Charles A.¹
 Kimball, Walter ²
 Moore, Thomas ¹
 Morse, R. P.¹
 Nixon, James ¹
 Pickard, William ²
 Pingree, Frank O.¹

Priest Bros.²
 Priest, Frank B.
 Sampson, Bradford ¹
 Sanderson, George W.¹
 Stone, G. F.¹
 Whitcomb, J. H. D.¹
 Whitcomb, N. H.²
 Works, H. F.¹

Stow.

Davidson, J. H.²
 Folsom, B. F.²
 Geers, O. M.²
 Hallock, F. R.¹
 Nickerson, N. E.¹

Parker Bros.
 Shaughnessy, E.²
 Stephenson, John ²
 Stevens, F. H.²

Stokes, Charles ²
 Underwood, H. P.²
 Warren, Henry ¹
 Wetherbee, C. D.²

Sudbury.

Bent, James E.²
 Bright, W. E.¹
 Carrigan, M. T.²
 Chase Bros.¹
 Clark, Fred ²
 Cummings, George P.¹
 Dakin, A. A.¹
 Ferden, C. L.²
 French, W. A.²
 Goodnow, Elisha ²

Goodnow, George E.²
 Ham, Fred ²
 Haynes, Charles ²
 Haynes, Charles E.²
 Haynes, Hiram ²
 Huntley, L. H.¹
 McDade, John ¹
 Moore, William M.²
 O'Neil, Thomas ²
 Powers, P. J.²

Rice, C. W.²
 Rowe, L. H.²
 Smith, E. R.²
 Stewart, Albert ²
 Stone, W. L.²
 Sudbury Town Farm ¹
 Thompson, A. N.²
 Walker, F. F.²
 Walker, J. M.²
 Wright, Charles ²

Wayland.

Bryden, S. D.²
 Cutting, C. A.²
 Damon, Isaac ²
 Dwight, George W.²
 Eagan, J. W.²
 Holmes, Alex ²

Hunter, Joseph ¹
 Irving Bros.
 Johnson, N. B.²
 Linehan, John ²
 Loring, Miss A. P.¹
 Moore, J. L.¹

Parmenter, J. W.²
 Quinn, Frank ²
 Roby, Mrs. Mary A.
 Sevearns, Ralph ¹
 Shaw, Francis ¹
 Wellington, A. D.²

OPINION OF THE ATTORNEY-GENERAL CONCERNING SALES OF FRACTIONAL PARTS OF ORIGINAL PACKAGES OF PROPRIETARY MEDICINES.

The following communication has been received from the office of the Attorney-General: —

Boston, July 9, 1908.

CHARLES HARRINGTON, M.D., *Secretary, State Board of Health.*

DEAR SIR:— You request my opinion as to the construction to be given to St. 1906, c. 386, as amended by St. 1907, c. 259. The amended act, so far as it is material upon the questions presented, is as follows: —

Upon every package, bottle or other receptacle holding any proprietary or patent medicine, or any proprietary or patent food preparation, which contains alcohol, morphine, codeine, opium, heroin, chloroform, cannibis indica, chloral hydrate, or acetanilid, or any derivative or preparation of any such substances,

¹ Reported favorably on first inspection as well.

² Second inspection.

shall be marked or inscribed a statement on the label of the quantity or proportion of each of said substances contained therein. The size of type in which the names of the above substances shall be printed on the labels as above, shall not be smaller than eight point (brevier) caps: *provided*, that in case the size of the package will not permit the use of eight point cap type the size of the type may be reduced proportionately. The provisions of section nineteen of chapter seventy-five of the Revised Laws, so far as they are consistent herewith, shall apply to the manner and form in which such statements shall be marked or inscribed.

Section 3 prohibits the sale of any patent or proprietary medicine containing certain substances.

Section 4 prohibits the sale of certain drugs except under certain restrictions.

Section 5 exempts certain classes from the prohibitions of sections 3 and 4.

Section 6 is as follows:—

Whoever manufactures, sells or offers for sale any medicine or food preparation in violation of the provisions of this act shall be punished by a fine of not less than five nor more than one hundred dollars. It shall be the duty of the state board of health to cause the prosecution of all persons violating the provisions of this act; but no prosecution shall be brought for the sale at retail, or for the gift or exchange of any patent or proprietary medicine or food preparation containing any drug or preparation the sale of which is prohibited or restricted as aforesaid, unless the said board has, prior to such sale, gift or exchange, given public notice in such trade journals or newspapers as it may select that the gift, exchange or sale at retail of the said medicine or food preparation would be contrary to law.

You state that a number of retail druggists have asked whether it is necessary for them, within the meaning of the above statute, to label with the prescribed label fractional parts sold from the original package by prescription, and they have pointed out the practical difficulty in carrying a stock of labels for the very large variety of patent medicines which they are obliged to sell.

It seems to me that the law requires the labelling of the container of fractional parts of the original package. The language of the act is very comprehensive,—“every package, bottle or other receptacle holding any proprietary or patent medicine.” These words must be given their ordinary meaning, unless some reason appears for giving them a different meaning. If the Legislature had intended the act to apply only to original packages, it would have been easy so to limit the scope of the act. The words should also be interpreted in such a way as to carry out what appears to have been the intent of the Legislature. The most obvious and natural purpose of the act is the protection of all who are to buy the patent and proprietary medicines. It cannot have been the intent of the Legislature to protect only the druggists dealing in these medicines; and yet, if a fractional part of the original package is not to be marked, the public are no better informed as to

the ingredients of what they are buying than they were before the passage of the act, unless they take pains to ask to be shown the original package.

As to the second point, by section 6 the selling without label of patent or proprietary medicines in any quantity is made a distinct offence with a fixed penalty, and the offender is liable to a penalty upon the commission of the offence. The clause of the statute referring to prosecution after public notice refers to the sales prohibited and restricted by sections 3 and 4, which do not include and are not to be construed as connected with the sale of an unlabelled quantity.

Very truly yours,

(Signed) DANA MALONE,
Attorney-General.

**ADDITIONAL COCAINE PREPARATIONS ADVERTISED AS
UNSALEABLE AT RETAIL.**

Nichols' Compound Kola Cordial. Billings, Clapp & Co., manufacturing chemists, Boston.

The Ruby Catarrh Powder. Standard Remedy Company, Providence, R. I.

MONTHLY BULLETIN

OF THE

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OF

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STATE BOARD OF HEALTH.

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WEEKLY RETURNS OF DEATHS FROM CITIES AND TOWNS OF MORE THAN 10,000 POPULATION.

WEEK ENDING AUG. 1, 1908.

CITIES AND TOWNS.	Population. ¹ Esti- mated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal In- fections Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	617,082	218	102	101	7	23	1	2	5
Worcester,	134,341	37	14	5	—	1	—	—	—
Fall River,	106,305	39	27	23	3	1	—	—	1
Cambridge,	100,922	22	9	10	1	3	—	—	—
Lowell,	96,380	39	20	14	3	1	—	1	1
Lynn,	82,661	28	10	12	—	4	1	1	—
New Bedford,	82,580	38	13	18	—	3	—	1	—
Springfield,	81,425	23	9	6	—	—	—	1	—
Lawrence,	78,000	19	8	9	1	1	—	—	—
Somerville,	74,295	9	3	3	—	1	—	—	—
Brockton,	53,131	14	8	6	1	1	—	—	—
Holyoke,	52,652	31	16	17	3	2	2	—	—
Malden,	40,929	7	4	1	—	—	—	—	—
Chelsea,	39,363	5	1	—	—	—	—	—	—
Newton,	38,919	6	5	—	—	—	—	—	—
Salem,	38,666	8	5	2	—	—	—	—	—
Haverhill,	38,228	14	4	7	1	2	—	—	—
Fitchburg,	33,948	11	7	—	—	—	—	—	—
Everett,	32,415	7	2	1	—	1	—	—	—
Taunton,	30,967	9	4	5	—	1	—	—	—
Quincy,	30,924	4	1	—	—	—	—	—	—
Waltham,	28,120	3	1	—	—	—	—	—	—
Pittsfield,	27,168	11	3	3	—	1	—	—	—
Gloucester,	26,011	5	1	1	—	—	—	—	—
Brookline,	25,825	3	—	—	—	—	—	—	—
North Adams,	22,150	3	1	—	—	—	—	—	—
Chicopee,	20,831	11	7	2	1	1	—	—	—
Northampton,	20,789	12	3	2	—	2	—	—	—
Medford,	20,605	3	2	1	—	—	—	—	—
Beverly,	16,088	7	2	1	—	—	1	—	—
Leominster,	15,578	2	—	—	—	—	—	—	—
Hyde Park,	15,327	4	1	1	1	—	—	—	—
Melrose,	15,160	4	0	—	—	—	—	—	—
Newburyport,	14,794	—	—	—	—	—	—	—	—
Woburn,	14,492	2	1	—	—	—	—	—	—
Westfield,	14,457	8	2	—	—	—	—	—	—
Marlborough,	14,359	1	0	—	—	—	—	—	—
Revere,	14,248	4	2	—	—	—	—	—	—
Attleborough,	13,600	6	3	4	—	—	—	—	—
Peabody,	14,144	—	—	—	—	—	—	—	—
Adams,	13,375	2	2	—	—	—	—	—	—
Clinton,	13,105	1	0	—	—	—	—	—	—
Gardner,	12,794	1	—	—	—	—	—	—	—
Milford,	12,565	2	2	2	—	—	—	—	—
Watertown,	12,306	5	2	—	—	—	—	—	—
Plymouth,	12,149	—	—	—	—	—	—	—	—
Weymouth,	11,744	4	1	2	—	1	—	—	—
Framingham,	11,698	—	—	—	—	—	—	—	—
Southbridge,	11,630	4	1	1	—	—	1	—	—
Wakefield,	10,903	—	—	—	—	—	—	—	—
Webster,	10,825	—	—	—	—	—	—	—	—
Arlington,	10,307	1	—	—	—	—	—	—	—

Recapitulation.

Total of reporting towns, .	2,306,767	697	309	260	22	50	6	6	7
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¹ The populations were estimated upon the rate of growth from 1900 to 1905. Those of Taunton, Gloucester, North Adams and Clinton were allowed to stand as in 1905, having shown no increase during the five-year period. The gain in the population of Lowell is due to the annexation of a part of the town of Tewksbury. The population of Lawrence by the census of 1905 was 70,050, but, owing to the building of the new Wood and Arlington mills, employing at present some 3,000 operatives, an increase of about 8,000 is estimated by the Lawrence board of health, or 78,000.

WEEK ENDING AUG. 8, 1908.

CITIES AND TOWNS.	Population. Esti- mated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	617,082	214	99	138	13	64	1	1	-
Worcester,	134,341	36	12	15	4	7	-	-	-
Fall River,	106,305	39	23	17	-	1	-	-	1
Cambridge,	100,922	27	16	12	3	1	1	1	-
Lowell,	96,380	33	22	12	-	-	-	-	-
Lynn,	82,661	24	10	6	2	2	-	1	-
New Bedford,	82,580	30	16	12	-	4	1	-	-
Springfield,	81,425	20	3	8	1	2	1	-	-
Lawrence,	78,000	28	15	12	-	5	1	-	-
Somerville,	74,295	17	7	6	1	2	-	-	-
Brockton,	53,131	12	7	3	-	1	-	-	-
Holyoke,	52,652	22	10	12	-	3	-	-	-
Malden,	40,929	12	4	2	-	1	-	-	-
Chelsea,	39,363	5	1	-	-	-	-	-	-
Newton,	38,919	12	5	5	-	1	-	-	-
Salem,	38,666	12	8	4	-	1	-	-	-
Haverhill,	38,228	8	8	6	-	-	-	-	-
Fitchburg,	33,948	9	5	1	-	1	-	-	-
Everett,	32,415	6	5	-	-	-	-	-	-
Taunton,	30,967	13	4	2	1	2	-	-	-
Quincy,	30,924	7	4	-	-	-	-	-	-
Waltham,	28,120	4	0	1	1	-	-	-	-
Pittsfield,	27,168	9	5	3	1	-	-	-	-
Gloucester,	26,011	3	1	-	-	-	-	-	-
Brookline,	25,825	4	-	-	-	-	-	-	-
North Adams,	22,150	6	4	1	-	1	-	-	-
Chicopee,	20,831	12	9	-	-	-	-	-	-
Northampton,	20,789	10	5	5	-	-	-	-	-
Medford,	20,605	6	2	3	-	2	-	-	-
Beverly,	16,088	5	3	3	1	-	-	1	-
Leominster,	15,578	1	-	-	-	-	-	-	-
Hyde Park,	15,327	4	-	1	1	-	-	-	-
Melrose,	15,160	0	-	-	-	-	-	-	-
Newburyport,	14,794	-	-	-	-	-	-	-	-
Woburn,	14,492	2	1	-	-	-	-	-	-
Westfield,	14,457	5	2	1	-	-	-	-	-
Marlborough,	14,359	4	1	1	-	-	1	-	-
Revere,	14,248	2	-	-	-	-	-	-	-
Attleborough,	13,600	7	4	1	-	-	-	-	-
Peabody,	14,144	-	-	-	-	-	-	-	-
Adams,	13,375	3	2	3	-	1	-	-	-
Clinton,	13,105	4	1	-	-	-	-	-	-
Gardner,	12,794	3	2	1	-	-	-	-	-
Milford,	12,565	5	1	5	-	-	-	-	-
Watertown,	12,306	1	0	-	-	-	-	-	-
Plymouth,	12,149	-	-	-	-	-	-	-	-
Weymouth,	11,744	3	2	2	-	1	-	-	-
Framingham,	11,698	3	1	-	-	-	-	-	-
Southbridge,	11,630	2	2	2	-	-	-	-	-
Wakefield,	10,903	-	-	-	-	-	-	-	-
Webster,	10,825	-	-	-	-	-	-	-	-
Arlington,	10,307	3	1	-	-	-	-	-	-

Recapitulation.

Total of reporting towns, .	2,318,465	697	333	306	29	103	6	4	1
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WEEK ENDING AUG. 15, 1908.

CITIES AND TOWNS.	Population. Esti- mated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	617,082	217	101	94	17	13	—	1	1
Worcester,	134,341	44	17	17	1	3	—	1	—
Fall River,	106,305	43	28	26	2	6	—	2	—
Cambridge,	100,922	28	16	10	1	1	—	—	—
Lowell,	96,380	35	24	21	6	—	—	—	—
Lynn,	82,661	25	13	4	—	3	1	—	—
New Bedford,	82,580	35	24	20	—	3	—	—	—
Springfield,	81,425	23	12	4	—	—	—	1	—
Lawrence,	78,000	29	21	8	—	1	—	—	—
Somerville,	74,295	14	3	1	—	—	—	—	—
Brockton,	53,131	15	6	1	—	1	—	—	—
Holyoke,	52,652	34	15	10	—	9	—	—	—
Malden,	40,929	16	5	6	—	1	—	1	—
Chelsea,	39,363	9	2	2	—	2	—	—	—
Newton,	38,919	7	5	4	—	—	—	—	—
Salem,	38,666	20	10	1	—	1	—	—	—
Haverhill,	38,228	14	4	7	—	3	—	—	—
Fitchburg,	33,948	10	7	2	1	—	—	—	—
Everett,	32,415	13	7	2	—	2	—	—	—
Taunton,	30,967	17	7	9	1	3	—	1	—
Quincy,	30,924	12	8	6	1	—	—	—	—
Waltham,	28,120	3	1	—	—	—	—	—	—
Pittsfield,	27,168	5	1	1	1	—	—	—	—
Gloucester,	26,011	11	7	1	—	1	—	—	—
Brookline,	25,825	4	—	—	—	—	—	—	—
North Adams,	22,150	5	2	—	—	—	—	—	—
Chicopee,	20,831	7	4	1	—	—	—	—	—
Northampton,	20,789	2	1	1	—	—	—	—	1
Medford,	20,605	2	—	1	—	1	—	—	—
Beverly,	16,088	2	—	1	—	—	—	—	—
Leominster,	15,578	4	4	3	—	—	—	—	—
Hyde Park,	15,327	6	3	2	—	—	—	—	—
Melrose,	15,160	4	1	1	—	—	—	—	—
Newburyport,	14,794	—	—	—	—	—	—	—	—
Woburn,	14,492	4	1	—	—	—	—	—	—
Westfield,	14,457	—	—	—	—	—	—	—	—
Marlborough,	14,359	4	1	2	—	—	—	—	—
Revere,	14,248	6	3	1	—	—	—	—	—
Attleborough,	13,600	2	—	—	—	—	—	—	—
Peabody,	14,144	—	—	—	—	—	—	—	—
Adams,	13,375	7	6	4	—	—	—	—	—
Clinton,	13,105	2	0	—	—	—	—	—	—
Gardner,	12,794	4	1	2	—	1	—	—	—
Milford,	12,565	5	1	4	1	—	—	—	—
Watertown,	12,306	0	—	—	—	—	—	—	—
Plymouth,	12,149	—	—	—	—	—	—	—	—
Weymouth,	11,744	1	0	—	—	—	—	—	—
Framingham,	11,698	6	1	—	—	—	—	—	—
Southbridge,	11,630	5	3	2	—	—	—	—	—
Wakefield,	10,903	—	—	—	—	—	—	—	—
Webster,	10,825	—	—	—	—	—	—	—	—
Arlington,	10,307	2	—	—	—	—	—	—	—

Recapitulation.

Total of reporting towns, .	2,318,465	763	376	282	32	55	1	7	2
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WEEK ENDING AUG. 22, 1908.

CITIES AND TOWNS.	Population. Est- imated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	617,082	275	132	111	18	18	—	—	—
Worcester,	134,341	25	8	8	—	3	1	—	—
Fall River,	106,305	39	21	19	2	1	—	—	—
Cambridge,	100,922	27	14	12	1	3	1	—	—
Lowell,	96,380	60	31	30	2	2	—	1	—
Lynn,	82,661	20	8	3	—	2	—	—	—
New Bedford,	82,580	33	23	15	1	—	—	1	—
Springfield,	81,425	24	6	6	1	1	1	—	—
Lawrence,	78,000	29	12	16	2	3	—	—	—
Somerville,	74,295	17	12	8	1	—	—	—	—
Brockton,	53,131	13	7	1	—	1	—	—	—
Holyoke,	52,652	18	11	7	2	2	—	—	—
Malden,	40,929	13	4	2	—	2	—	—	—
Chelsea,	39,363	6	1	1	—	1	—	—	—
Newton,	38,919	5	1	2	—	2	—	—	—
Salem,	38,666	13	6	2	1	—	—	1	—
Haverhill,	38,228	16	8	7	—	—	—	—	—
Fitchburg,	33,948	11	7	3	2	1	—	—	—
Everett,	32,415	6	3	1	—	1	—	—	—
Taunton,	30,967	13	7	12	—	2	—	1	—
Quincy,	30,924	5	1	2	—	—	—	—	—
Waltham,	28,120	7	3	1	—	1	—	—	—
Pittsfield,	27,168	9	4	4	1	—	—	—	—
Gloucester,	26,011	10	6	4	—	1	—	—	—
Brookline,	25,825	4	1	1	—	1	—	—	—
North Adams,	22,150	7	5	—	—	—	—	—	—
Chicopee,	20,831	8	3	2	—	1	—	—	—
Northampton,	20,789	5	0	—	—	—	—	—	—
Medford,	20,605	6	1	—	—	—	—	—	—
Beverly,	16,088	4	—	2	—	1	—	1	—
Leominster,	15,578	1	1	1	—	—	—	—	—
Hyde Park,	15,327	2	1	—	—	—	—	—	—
Melrose,	15,160	3	2	2	—	—	—	—	—
Newburyport,	14,794	—	—	—	—	—	—	—	—
Woburn,	14,492	3	0	—	—	—	—	—	—
Westfield,	14,457	—	—	—	—	—	—	—	—
Marlborough,	14,359	2	0	—	—	—	—	—	—
Revere,	14,248	6	5	1	—	—	—	—	—
Attleborough,	13,600	6	3	—	—	—	—	—	—
Peabody,	14,144	—	—	—	—	—	—	—	—
Adams,	13,375	3	2	2	—	1	—	—	—
Clinton,	13,105	2	2	1	—	—	—	—	—
Gardner,	12,794	4	4	2	—	—	—	—	—
Milford,	12,565	6	1	3	1	—	—	—	—
Watertown,	12,306	1	0	—	—	—	—	—	—
Plymouth,	12,149	—	—	—	—	—	—	—	—
Weymouth,	11,744	1	0	1	—	—	—	—	—
Framingham,	11,698	4	1	1	—	—	—	—	—
Southbridge,	11,630	3	1	2	—	—	—	1	—
Wakefield,	10,903	—	—	—	—	—	—	—	—
Webster,	10,825	—	—	—	—	—	—	—	—
Arlington,	10,307	1	—	—	—	—	—	—	—

Recapitulation.

Total of reporting towns, .	2,304,008	776	369	298	35	51	3	6	—
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WEEK ENDING AUG. 29, 1908.

CITIES AND TOWNS.	Population. Estimated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —						
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.	
Boston,	617,082	228	105	92	17	18	2	1	—	
Worcester,	134,341	35	12	5	—	—	—	2	—	
Fall River,	106,305	54	27	21	—	2	1	—	—	
Cambridge,	100,922	20	9	10	2	1	—	—	—	
Lowell,	96,380	53	27	18	5	4	1	—	—	
Lynn,	82,661	22	11	2	—	1	—	—	—	
New Bedford,	82,580	36	19	17	1	2	—	2	—	
Springfield,	81,425	19	5	9	—	2	1	2	—	
Lawrence,	78,000	25	14	12	—	2	—	—	—	
Somerville,	74,295	16	4	7	1	2	1	—	—	
Brockton,	53,131	13	6	5	2	1	—	—	—	
Holyoke,	52,652	17	9	8	—	2	—	—	—	
Malden,	40,929	12	4	4	—	1	1	1	—	
Chelsea,	39,363	17	1	1	—	1	—	—	—	
Newton,	38,919	7	1	1	—	—	1	—	—	
Salem,	38,666	7	3	1	—	1	—	—	—	
Haverhill,	38,228	12	6	9	—	3	—	—	—	
Fitchburg,	33,948	6	2	—	—	—	—	—	—	
Everett,	32,415	9	3	—	—	—	—	—	—	
Taunton,	30,967	14	5	10	1	1	—	1	—	
Quincy,	30,924	10	6	6	—	1	—	—	—	
Waltham,	28,120	2	1	—	—	—	—	—	—	
Pittsfield,	27,168	6	3	2	—	—	—	—	—	
Gloucester,	26,011	11	5	—	—	—	—	—	—	
Brookline,	25,825	4	—	—	—	—	—	—	—	
North Adams,	22,150	5	4	—	—	—	—	—	—	
Chicopee,	20,831	9	5	2	—	1	1	—	—	
Northampton,	20,789	7	2	1	—	—	—	—	1	
Medford,	20,605	5	—	—	—	—	—	—	—	
Beverly,	16,088	2	1	1	—	—	1	—	—	
Leominster,	15,578	4	1	—	—	—	—	—	—	
Hyde Park,	15,327	4	0	—	—	—	—	—	—	
Melrose,	15,160	2	1	—	—	—	—	—	—	
Newburyport,	14,794	—	—	—	—	—	—	—	—	
Woburn,	14,492	3	2	1	—	1	—	—	—	
Westfield,	14,457	3	—	1	—	1	—	—	—	
Marlborough,	14,359	2	0	—	—	—	—	—	—	
Revere,	14,248	5	4	1	—	—	—	—	—	
Attleborough,	13,600	4	0	1	—	1	—	—	—	
Peabody,	14,144	—	—	—	—	—	—	—	—	
Adams,	13,375	4	4	4	—	—	—	—	—	
Clinton,	13,105	5	1	—	—	—	—	—	—	
Gardner,	12,794	4	2	2	—	—	—	—	—	
Milford,	12,565	5	—	1	—	—	—	—	—	
Watertown,	12,306	3	1	3	1	1	—	—	—	
Plymouth,	12,149	—	—	—	—	—	—	—	—	
Weymouth,	11,744	4	2	2	—	2	—	—	—	
Framingham,	11,698	3	1	—	—	—	—	—	—	
Southbridge,	11,630	1	1	—	—	—	—	—	—	
Wakefield,	10,903	—	—	—	—	—	—	—	—	
Webster,	10,825	—	—	—	—	—	—	—	—	
Arlington,	10,307	3	2	—	—	—	—	—	—	

Recapitulation.

Total of reporting towns,	2,318,465	742	322	260	30	52	10	9	1
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WEEKLY RETURNS OF DEATHS FROM CERTAIN INFECTIOUS DISEASES.

DEATHS FROM INFECTIOUS DISEASES NOT SPECIFICALLY MENTIONED IN ABOVE TABLES DURING THE WEEKS OF AUGUST 1, 8, 15, 22 AND 29, 1908.

DISEASE.	Place.	WEEK ENDING —				
		Aug. 1.	Aug. 8.	Aug. 15.	Aug. 22.	Aug. 29.
Cerebro-spinal meningitis, .	Boston, . .	1	1	—	1	—
	Chicopee, . .	—	—	—	1	—
	Westfield, . .	—	1	—	—	—
	Worcester, . .	1	—	2	1	—
Erysipelas,	Boston, . .	1	3	—	1	1
	Lowell, . .	—	1	—	—	—
	Worcester, . .	—	1	—	—	—
Scarlet fever,	Boston, . .	1	4	2	2	—
	Taunton, . .	—	—	—	1	—
	Worcester, . .	—	—	—	—	2
Whooping cough,	Beverly, . .	—	1	1	—	—
	Boston, . .	4	2	1	3	2
	Cambridge, . .	1	—	—	—	—
	Fall River, . .	—	—	1	1	—
	Lawrence, . .	—	—	—	—	1
	Lowell, . .	—	1	—	—	—
	Medford, . .	—	1	—	—	—
	Newton, . .	—	—	1	—	—
	Somerville, . .	—	—	—	1	—
	Springfield, . .	1	—	—	—	—
	Weymouth, . .	—	1	—	—	—
	Worcester, . .	—	—	1	—	—

WEEKLY RETURNS OF CASES OF INFECTIOUS DISEASES.

CASES OF INFECTIOUS DISEASES REPORTED DURING THE WEEKS OF
AUGUST 1, 8, 15, 22 AND 29, 1908.

[Under the provisions of section 52 of chapter 75 of the Revised Laws.]

	WEEK ENDING —				
	Aug. 1.	Aug. 8.	Aug. 15.	Aug. 22.	Aug. 29.
Diphtheria,	100	92	106	116	124
Measles,	81	59	37	39	29
Scarlet fever,	83	72	66	65	78
Typhoid fever,	81	74	98	88	122
Phthisis,	83	127	90	98	115
Cerebro-spinal meningitis,	6	1	4	2	2
Whooping cough,	24	25	42	26	17
Varicella,	3	1	1	1	3
Erysipelas,	—	—	—	1	—
Leprosy,	—	—	1	—	—
Ophthalmia neonatorum,	—	1	—	—	—
Tracoma,	—	2	—	—	2
Trichinosis,	—	—	1	—	—
Tubercular meningitis,	—	1	—	—	—

MONTHLY REPORT ON INSPECTION OF FOOD AND DRUGS.

The following summary presents the results of the examination of food and drugs made by the State Board of Health during the month of August, 1908: —

ARTICLES EXAMINED.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.	ARTICLES EXAMINED.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.
Butter,	4	—	4	Meat products —			
Canned fruit and vegetables,	3	—	3	<i>Concluded.</i>			
Cocoa,	2	—	2	Sausages,	4	—	4
Coffee,	1	—	1	Tripe,	1	—	1
Cream,	7	3	10	Non-alcoholic drinks,	3	—	3
Drugs,	36	16	52	Proprietary foods,	2	4	6
Extract of vanilla,	2	—	2	Rye flour,	2	—	2
Grape juice,	1	—	1	Salad dressing,	1	—	1
Lard,	2	—	2	Spices,	6	—	6
Maple sugar,	1	—	1	Table sauce,	1	—	1
Milk,	163	137	300	Pickles,	2	1	3
Meat products: —							
Canned meat,	2	—	2	Total,	247	161	408
Hamburg steak,	1	—	1				

The samples of drugs found to be adulterated were spirits of camphor, whiskey and several proprietary medicines.

The cities and towns in which samples were collected were: Acton, Ayer, Barnstable, Bedford, Beverly, Billerica, Boston, Brockton, Burlington, Cambridge, Cohasset, Concord, Eastham, Fitchburg, Gloucester, Haverhill, Hingham, Lawrence, Lexington, Littleton, Lowell, Milford, Pepperell, Plymouth, Quincy, Salem, Saugus, Shrewsbury, Springfield, Tyngsborough, Whitman, Wilmington, Winchester, Winchendon and Woburn.

PROSECUTIONS FOR VIOLATIONS OF THE LAW RELATING TO FOOD AND DRUGS.

Thirty-five convictions were secured during the month of August, 1908, for selling adulterated food and drugs and preparations containing cocaine, as follows:—

No.	Name of Defendant.	Place.	Character of Article sold.
1	Arlow D. Bailey (Streeter & Bailey).	Winchendon, .	Milk (total solids, 8.23). ^{1, 2}
2	Walter F. Beal,	Milford,	Milk (total solids, 11.64).
3	William I. Beggerstaff,	Billerica,	Milk (total solids, 10.90).
4	Joseph S. Brassels,	New Bedford,	Milk (total solids, 11.28). ²
5	Herbert E. Brier,	Saugus,	Milk (total solids, 10.02). ^{3, 4}
6	Edward C. Burnett,	Lynn,	Milk (total solids, 8.08).
7	Edward C. Burnett,	Lynn,	Milk (total solids, 8.08). ¹
8	Ulysses G. Carter,	Haverhill,	Milk (total solids, 11.49).
9	Francis W. Clark,	Saugus,	Milk (total solids, 11.48).
10	Frank H. Cornell,	New Bedford,	Obstruction. ^{2, 4}
11	William E. Daily,	Braintree,	Milk (total solids, 10.80). ¹
12	William H. Evans,	Rockport,	Milk (total solids, 9.49). ^{1, 2}
13	William H. Evans,	Rockport,	Milk (total solids, 9.49).
14	Frank A. Fernandes,	New Bedford,	Milk (total solids, 11.65). ²
15	William Foss,	Concord,	Milk (total solids, 11.28). ^{2, 4}
16	Joseph Foster (manager Wymans),	Lynn,	Milk (total solids, 8.72). ¹
17	Nathan Holbrook,	Upton,	Milk (total solids, 11.27).
18	John W. Kimball,	Haverhill,	Milk (total solids, 11.49).
19	William H. McCarthy,	Lynn,	Milk (total solids, 11.49).
20	William H. McCarthy,	Lynn,	Milk (total solids, 10.00). ¹
21	Joseph McLaughlin,	Lynn,	Milk (total solids, 10.00). ¹
22	Michael McDevitt,	Woburn,	Milk (total solids, 9.02). ^{1, 2}
23	Joseph M. Oliver,	Bedford,	Milk (total solids, 7.44). ^{1, 2}
24	John B. Proulx,	Haverhill,	Milk (total solids, 10.60).
25	David T. Ray,	Haverhill,	Milk (total solids, 11.43). ²
26	David T. Ray,	Haverhill,	Milk (total solids, 8.60). ^{1, 2}
27	Patrick Rooney,	Bedford,	Milk (total solids, 10.49). ^{1, 2}
28	Wala F. Streeter (Streeter & Bailey).	Winchendon, .	Milk (total solids, 8.23). ^{1, 2}
29	William P. Tilden (Tilden & Addington).	Saugus,	Milk (total solids, 11.26). ²

¹ Watered.² Producer.³ Skimmed.⁴ Appealed.

No.	Name of Defendant.	Place.	Character of Article sold.
30	Amos C. Towle,	Saugus,	Milk (total solids, 11.34). ¹
31	George Vasho (driver for Nutter Bros.).	East Bridgewater,	Milk (total solids, 11.18). ²
32	George Vasho (driver for Nutter Bros.).	East Bridgewater,	Milk (total solids, 11.18). ¹
33	John Walkey,	Saugus,	Milk (total solids, 10.72). ^{3, 4}
34	Alvah G. Wheeler,	Concord,	Milk (total solids, 11.71). ^{2, 4}
35	Harry S. Wolcott,	Concord,	Milk (total solids, 11.28). ^{2, 4}

¹ Watered.² Producer.³ Skimmed.⁴ Appealed.

Fines imposed, \$900.

LIST OF ADULTERATED OR IMPROPERLY LABELLED FOODS, ETC., FOR AUGUST, 1908.

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
2017 P	"Hire's Root Beer Extract."	The Charles E. Hires Company, Philadelphia, Pa.,	6.56 per cent. alcohol.
2843 P	"Crescent" root beer extract.	Crescent Extract Company (no address),	7.32 per cent. alcohol.
q 215	Laxative balsam,	H. F. Plummer Drug Company, Beverly, Mass.,	10.36 per cent. alcohol.
2845 P			Total solids 11.18 per cent.; fat 2.60 per cent.;
			skimmed milk.
2847 P		Wm. J. Biggerstaff, Billerica, Mass., ¹	Total solids 10.90 per cent.; fat 2.40 per cent.;
			skimmed milk.
8474 M			Total solids 10.81 per cent.
8476 M			" " 10.80 per cent.
8478 M			" " 10.09 per cent.
8480 M			" " 10.24 per cent.
8482 M			" " 10.80 per cent.
8484 M			" " 10.28 per cent.
8486 M			" " 10.80 per cent.
8488 M			" " 10.21 per cent.
8490 M		Bill Anastar, Tyngsborough, Mass., ¹	" " 10.21 per cent.
8492 M			" " 10.49 per cent.
8494 M			" " 10.50 per cent.
8496 M			" " 10.40 per cent.
8498 M			" " 10.80 per cent.
8500 M			" " 10.92 per cent.
8502 M			" " 11.18 per cent.
8504 M			" " 11.18 per cent.
8546 M		G. P. Beckford, Plymouth, Mass., ¹	" " 10.00 per cent.
2957 P			" " 7.69 per cent.
2959 P			" " 7.44 per cent.
2961 P			" " 7.60 per cent.
2963 P		Joseph M. Oliver, Bedford, Mass., ¹	" " 8.21 per cent.
2965 P			" " 8.20 per cent.
2967 P			" " 7.80 per cent.

contained added water.

3083 P	Milk,	{	Patrick Rooney, Bedford, Mass., ¹	{	" " " " " "	10.49 per cent. 11.08 per cent. 10.63 per cent. 10.23 per cent. 11.36 per cent. 11.00 per cent. 9.02 per cent. 9.08 per cent. 11.10 per cent. 11.35 per cent. 11.37 per cent.
3085 P						
3087 P						
2989 P						
2991 P						
2993 P						
2995 P						
2997 P						
2999 P						
3001 P						
3003 P						
			Michael McDeavitt, Woburn, Mass., ¹			

contained added water.

¹ Producer.

INSPECTION OF DAIRIES.

During the month of August, 1908, 59 dairies were examined in the following places:—

PLACE.	Number examined.	Number found to present no Objectionable Features.	Per Cent.	Number to which Letters were sent.	Per Cent.
Ayer,	5	2	40.00	3	60.00
Second inspection,	3	2	66.67	1	33.33
Holliston,	—	—	—	—	—
Second inspection,	7	6	85.71	1	14.29
Hudson,	10	6	60.00	4	40.00
Second inspection,	5	3	60.00	2	40.00
Shirley,	15	10	66.67	5	33.33
Second inspection,	13	4	30.77	9	69.23
Stow,	1	—	—	1	100.00

Total number of dairies examined,	59
Number found to be free from objectionable conditions,	33
Number to which letters were sent,	26
Total number of conditions to which attention was called,	83
Percentage of dairies which passed inspection,	55.93

The names of the owners of dairies found to be worthy of commendation follow:—

Ayer.

Ayer Town Farm
Root, N.¹

Stone, Charles E.²
Tillman, Herbert

Holliston.

Brooks, George E. W.²
Gooch, A. H.²

Merrill, A. R.²
Pollard, M. S. P.²

Shaw, T. A.²
Whitney, Joel F.²

Hudson.

Barnard, Charles¹
Brigham, Francis W.
Clark & Gazola

Goodrich, Walter
Hall, Eugene J.
Keyser, Charles

Macomber, Mrs. E. J.
Stanwood, J. E.¹
Stratton, H.¹

Shirley.

Colburn, R. F.
Crow, John
Cummings, A. R.¹
Farnsworth, M. V.¹
Hatch, H. A.¹

Hazen, Mrs. Kate
Holder, James
Houghton, S.
James, H.
Longley, M. W.¹

Sanderson, George S.
Wells, George S.
White, Frank B.
Winslow, Mrs. J. G.

¹ Second inspection.

² Reported favorably on first inspection as well.

ENFORCING QUARANTINE IN MEASLES.

In order to give public notice to travellers of the existence of contagious disease, and thereby prevent so far as possible the spread of infection, the Legislature passed the following law:—

REVISED LAWS, CHAPTER 75.

SECTION 43. If such disease exists in a town, the selectmen and board of health shall use all possible care to prevent the spread of the infection, and shall give public notice of infected places to travellers by displaying red flags at proper distances and by all other means which in their judgment may be most effectual for the common safety. Whoever obstructs the selectmen, board of health or its agent in using such means, or wilfully removes, obliterates, defaces or handles such red flags or other signals shall forfeit not less than ten nor more than one hundred dollars for each offence.

The question is not infrequently asked whether in case of measles a strict quarantine is maintained, as in scarlet fever, and the answer is that the Legislature has left a large measure of discretion to local health authorities in the matter, it being their duty to prevent by all means in their power the spread of diseases dangerous to the public health.

On August 1 the State Inspector of Health of District No. 12 found that William Hastings of the town of Sterling had removed, without the knowledge of the agent of the board of health, the signal of quarantine for measles, which had been posted by the agent of that board. The State Inspector of Health instituted court proceedings against said William Hastings for violation of the above section. On August 18 the defendant pleaded guilty in the court at Clinton, and was fined \$10.

MONTHLY BULLETIN

OF THE

STATE BOARD OF HEALTH

OF

MASSACHUSETTS.

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SEPTEMBER, 1908.

Vol. 3. No. 9.

ENTERED AT THE POST-OFFICE AT BOSTON, FEB. 15, 1906, AS SECOND-CLASS MATTER. ACT OF JULY 16, 1894.

STATE BOARD OF HEALTH.

HENRY P. WALCOTT, M.D., CAMBRIDGE, *Chairman.*

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CHARLES HARRINGTON, M.D., BOSTON, *Secretary.*

BOSTON
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1908

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[REDACTED]

While this Bulletin was in press, Dr. Charles Harrington, secretary of the State Board of Health, died suddenly in the prime of life at Lynton, England, on September 11, in the fifty-third year of his age.

For four years he was the secretary and executive officer of the Board. He brought to it ample knowledge, ability and industry. His education had been carried on with especial regard to the branch of medicine to which his life was devoted. He was an original and accurate investigator of sanitary questions, a clear thinker and a courageous administrator, and always a much-loved associate.

[REDACTED]

WEEKLY RETURNS OF DEATHS FROM CITIES AND TOWNS OF MORE THAN 10,000 POPULATION.

WEEK ENDING SEPT. 5, 1908.

CITIES AND TOWNS.	Population. ¹ Esti- mated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	617,082	228	110	87	9	18	3	2	—
Worcester,	134,341	31	7	7	—	3	1	—	—
Fall River,	106,305	36	21	13	1	1	—	—	—
Cambridge,	100,922	28	8	8	1	3	—	—	—
Lowell,	96,380	38	20	10	2	3	—	—	—
Lynn,	82,661	30	6	6	—	1	—	1	—
New Bedford,	82,580	31	16	13	2	1	—	—	—
Springfield,	81,425	21	9	4	—	—	—	—	—
Lawrence,	78,000	17	10	10	1	1	1	—	—
Somerville,	74,295	19	3	7	4	2	—	—	—
Brockton,	53,131	16	8	6	—	2	—	—	—
Holyoke,	52,652	10	6	4	—	3	—	—	—
Malden,	40,929	10	3	1	—	—	—	—	—
Chelsea,	39,363	9	4	—	—	—	—	—	—
Newton,	38,919	8	3	2	—	1	—	—	—
Salem,	38,666	7	1	2	—	2	—	—	—
Haverhill,	38,228	14	4	6	—	1	—	—	—
Fitchburg,	33,948	11	5	3	1	—	—	—	—
Everett,	32,415	6	4	1	—	—	—	—	—
Taunton,	30,967	10	5	9	1	2	—	—	—
Quincy,	30,924	8	5	6	—	—	2	—	—
Waltham,	28,120	4	2	—	—	—	—	—	—
Pittsfield,	27,168	9	2	4	—	—	—	—	—
Gloucester,	26,011	8	2	—	—	—	—	—	—
Brookline,	25,825	2	—	—	—	—	—	—	—
North Adams,	22,150	3	—	—	—	—	—	—	—
Chicopee,	20,831	8	5	2	1	—	—	—	—
Northampton,	20,789	8	3	2	—	—	—	—	—
Medford,	20,605	4	—	—	—	—	—	—	—
Beverly,	16,088	6	1	2	—	—	—	1	—
Leominster,	15,578	3	1	1	—	—	—	—	—
Hyde Park,	15,327	5	1	—	—	—	—	—	—
Melrose,	15,160	4	0	—	—	—	—	—	—
Newburyport,	14,794	—	—	—	—	—	—	—	—
Woburn,	14,492	4	1	—	—	—	—	—	—
Westfield,	14,457	6	4	—	—	—	—	—	—
Marlborough,	14,359	2	2	—	—	—	—	—	—
Revere,	14,248	5	—	1	—	1	—	—	—
Attleborough,	13,600	1	0	—	—	—	—	—	—
Peabody,	14,144	—	—	—	—	—	—	—	—
Adams,	13,375	5	4	2	—	—	—	—	—
Clinton,	13,105	3	0	1	—	—	—	—	—
Gardner,	12,794	3	2	1	1	—	—	—	—
Milford,	12,565	—	—	—	—	—	—	—	—
Watertown,	12,306	2	1	—	—	—	—	—	—
Plymouth,	12,149	—	—	—	—	—	—	—	—
Weymouth,	11,744	2	0	—	—	—	—	—	—
Framingham,	11,698	2	—	1	—	—	—	—	—
Southbridge,	11,630	4	2	2	—	1	—	—	—
Wakefield,	10,903	—	—	—	—	—	—	—	—
Webster,	10,825	—	—	—	—	—	—	—	—
Arlington,	10,307	3	1	1	—	—	—	1	—

Recapitulation.

Total of reporting towns, . . .	2,305,900	694	292	225	24	46	7	5	-
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¹ The populations were estimated upon the rate of growth from 1900 to 1905. Those of Taunton, Gloucester, North Adams and Clinton were allowed to stand as in 1905, having shown no increase during the five-year period. The gain in the population of Lowell is due to the annexation of a part of the town of Tewksbury. The population of Lawrence by the census of 1905 was 70,050, but, owing to the building of the new Wood and Arlington mills, employing at present some 3,000 operatives, an increase of about 8,000 is estimated by the Lawrence board of health, or 78,000.

WEEK ENDING SEPT. 12, 1908.

CITIES AND TOWNS.	Population. Esti- mated for 1908.	Reported Deaths In Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	617,082	223	104	88	9	21	6	3	3
Worcester,	134,341	44	16	12	2	2	-	1	-
Fall River,	106,305	33	24	19	1	2	1	1	-
Cambridge,	100,922	27	8	5	-	2	-	-	-
Lowell,	96,380	43	26	10	1	3	-	1	-
Lynn,	82,661	14	3	1	-	1	-	-	-
New Bedford,	82,580	35	21	16	-	1	-	1	-
Springfield,	81,425	21	4	4	-	2	-	2	-
Lawrence,	78,000	19	10	7	1	1	-	-	-
Somerville,	74,295	20	6	6	-	3	-	-	-
Brockton,	53,131	11	4	2	1	1	-	-	-
Holyoke,	52,652	22	6	6	1	1	-	-	-
Malden,	40,929	10	3	4	-	-	-	-	-
Chelsea,	39,363	4	3	-	-	-	-	-	-
Newton,	38,919	5	-	-	-	-	-	-	-
Salem,	38,666	6	-	1	-	1	-	-	-
Haverhill,	38,228	14	6	7	-	3	-	1	-
Fitchburg,	33,948	6	3	-	-	-	-	-	-
Everett,	32,415	7	5	1	-	1	-	-	-
Taunton,	30,967	16	4	9	2	1	-	-	-
Quincy,	30,924	9	3	4	-	1	-	-	-
Waltham,	28,120	6	1	1	-	1	-	-	-
Pittsfield,	27,163	10	3	6	-	2	-	1	-
Gloucester,	26,011	8	3	-	-	-	-	-	-
Brookline,	25,825	6	1	-	-	-	-	-	-
North Adams,	22,150	3	2	-	-	-	-	-	-
Chicopee,	20,831	6	2	1	-	1	-	-	-
Northampton,	20,789	7	2	-	-	-	-	-	-
Medford,	20,605	3	-	1	-	1	-	-	-
Beverly,	16,088	5	1	2	1	-	-	-	-
Leominster,	15,578	4	-	-	-	-	-	-	-
Hyde Park,	15,327	1	1	-	-	-	-	-	-
Melrose,	15,160	2	0	-	-	-	-	-	-
Newburyport,	14,794	-	-	-	-	-	-	-	-
Woburn,	14,492	2	-	-	-	-	-	-	-
Westfield,	14,457	5	3	1	-	-	-	1	-
Marlborough,	14,359	1	0	-	-	-	-	-	-
Revere,	14,248	4	-	-	-	-	-	-	-
Attleborough,	13,600	1	1	-	-	-	-	-	-
Peabody,	14,144	-	-	-	-	-	-	-	-
Adams,	13,375	1	1	-	-	-	-	-	-
Clinton,	13,105	8	-	1	-	1	-	-	-
Gardner,	12,794	7	3	4	-	1	-	-	-
Milford,	12,565	-	-	-	-	-	-	-	-
Watertown,	12,306	4	2	2	1	-	-	-	-
Plymouth,	12,149	-	-	-	-	-	-	-	-
Weymouth,	11,744	6	4	4	-	1	-	-	-
Framingham,	11,698	4	1	1	1	-	-	-	-
Southbridge,	11,630	2	-	-	-	-	-	-	-
Wakefield,	10,903	-	-	-	-	-	-	-	-
Webster,	10,825	-	-	-	-	-	-	-	-
Arlington,	10,307	0	-	-	-	-	-	-	-

Recapitulation.

Total of reporting towns, .	2,305,900	695	290	226	21	55	7	12	3
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WEEK ENDING SEPT. 19, 1908.

CITIES AND TOWNS.	Population. Estimated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	617,082	221	100	75	12	13	4	1	—
Worcester,	134,341	40	14	11	1	4	2	1	—
Fall River,	106,305	39	22	22	3	3	—	1	—
Cambridge,	100,922	27	14	7	—	2	—	—	2
Lowell,	96,380	36	17	10	2	2	1	1	—
Lynn,	82,661	19	9	8	—	4	—	—	—
New Bedford,	82,580	29	16	16	4	1	—	2	—
Springfield,	81,425	23	7	7	1	1	1	—	—
Lawrence,	78,000	23	12	12	1	3	—	—	—
Somerville,	74,295	14	1	2	—	1	—	1	—
Brockton,	53,131	11	6	4	2	—	—	—	—
Holyoke,	52,652	18	6	4	—	2	—	—	—
Malden,	40,929	7	1	3	1	1	—	—	—
Chelsea,	39,363	7	2	1	—	—	—	1	—
Newton,	38,919	10	3	1	1	—	—	—	—
Salem,	38,666	12	5	—	—	—	—	—	—
Haverhill,	38,228	8	1	3	—	2	—	—	—
Fitchburg,	33,948	12	9	1	—	1	—	—	—
Everett,	32,415	3	1	—	—	—	—	—	—
Taunton,	30,967	15	6	6	2	2	—	—	—
Quincy,	30,924	6	2	1	1	—	—	—	—
Waltham,	28,120	6	1	—	—	—	—	—	—
Pittsfield,	27,168	5	—	1	—	—	—	—	—
Gloucester,	26,011	3	—	—	—	—	—	—	—
Brookline,	25,825	2	—	—	—	—	—	—	—
North Adams,	22,150	1	1	—	—	—	—	—	—
Chicopee,	20,831	4	0	1	—	1	—	—	—
Northampton,	20,789	3	1	—	—	—	—	—	—
Medford,	20,605	1	1	1	—	—	—	—	—
Beverly,	16,088	1	1	1	—	—	—	—	—
Leominster,	15,578	2	1	1	—	—	—	—	—
Hyde Park,	15,327	2	—	1	—	—	1	—	—
Melrose,	15,160	2	1	—	—	—	—	—	—
Newburyport,	14,794	—	—	—	—	—	—	—	—
Woburn,	14,492	3	2	—	—	—	—	—	—
Westfield,	14,457	3	—	—	—	—	—	—	—
Marlborough,	14,359	4	0	1	—	1	—	—	—
Revere,	14,248	5	2	1	1	—	—	—	—
Attleborough,	13,600	3	2	1	—	—	—	—	—
Peabody,	14,144	—	—	—	—	—	—	—	—
Adams,	13,375	7	2	3	—	1	—	—	—
Clinton,	13,105	8	2	1	—	—	—	—	—
Gardner,	12,794	4	2	3	—	—	—	—	—
Milford,	12,565	—	—	—	—	—	—	—	—
Watertown,	12,306	0	—	—	—	—	—	—	—
Plymouth,	12,149	—	—	—	—	—	—	—	—
Weymouth,	11,744	6	0	2	1	1	—	—	—
Framingham,	11,698	1	—	—	—	—	—	—	—
Southbridge,	11,630	3	1	1	—	1	—	—	—
Wakefield,	10,903	—	—	—	—	—	—	—	—
Webster,	10,825	—	—	—	—	—	—	—	—
Arlington,	10,307	5	3	1	—	1	—	—	—

Recapitulation.

Total of reporting towns, . . .	2,305,900	662	276	213	33	48	9	8	2
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WEEK ENDING SEPT. 26, 1908.

CITIES AND TOWNS.	Population. Estimated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phtisis.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	617,082	253	89	99	22	24	4	10	2
Worcester,	134,341	35	14	12	2	5	-	-	-
Fall River,	106,305	45	34	29	6	2	-	1	-
Cambridge,	100,922	33	16	11	3	1	-	-	-
Lowell,	96,380	37	15	9	1	2	-	2	-
Lynn,	82,661	24	7	2	-	1	-	1	-
New Bedford,	82,580	36	18	15	2	4	-	-	-
Springfield,	81,425	19	8	6	2	-	-	1	-
Lawrence,	78,000	33	18	16	5	2	-	1	-
Somerville,	74,295	18	8	11	2	2	-	-	-
Brockton,	53,131	6	1	2	-	1	-	1	-
Holyoke,	52,652	16	8	8	1	1	1	-	-
Malden,	40,929	11	4	4	1	2	-	1	-
Chelsea,	39,363	6	4	1	-	1	-	-	-
Newton,	38,919	11	3	1	1	-	-	-	-
Salem,	38,666	11	3	2	1	-	-	-	-
Haverhill,	38,228	11	4	6	-	-	-	-	-
Fitchburg,	33,948	11	3	2	-	1	-	1	-
Everett,	32,415	9	5	2	-	-	1	1	-
Taunton,	30,967	12	5	5	-	1	-	-	-
Quincy,	30,924	9	1	2	-	1	1	-	-
Waltham,	28,120	7	1	2	-	1	-	-	-
Pittsfield,	27,168	11	2	4	2	-	-	2	-
Gloucester,	26,011	8	4	3	-	2	-	-	-
Brookline,	25,825	6	-	-	-	-	-	-	-
North Adams,	22,150	5	1	-	-	-	-	-	-
Chicopee,	20,831	2	2	-	-	-	-	-	-
Northampton,	20,789	8	3	3	-	-	1	-	-
Medford,	20,605	5	1	3	2	-	-	-	-
Beverly,	16,088	5	2	1	1	-	-	-	-
Leominster,	15,578	4	1	-	-	-	-	-	-
Hyde Park,	15,327	4	0	-	-	-	-	-	-
Melrose,	15,160	4	0	1	-	1	-	-	-
Newburyport,	14,794	-	-	-	-	-	-	-	-
Woburn,	14,492	3	1	-	-	-	-	-	-
Westfield,	14,457	5	-	3	-	-	-	3	-
Marlborough,	14,359	3	0	1	-	-	-	1	-
Revere,	14,248	2	1	-	-	-	-	-	-
Attleborough,	13,600	3	1	1	-	-	-	-	-
Peabody,	14,144	-	-	-	-	-	-	-	-
Adams,	13,375	4	1	-	-	-	-	-	-
Clinton,	13,105	7	4	1	-	1	-	-	-
Gardner,	12,794	4	1	1	-	-	-	1	-
Milford,	12,565	2	2	2	-	-	-	-	-
Watertown,	12,306	0	-	-	-	-	-	-	-
Plymouth,	12,149	-	-	-	-	-	-	-	-
Weymouth,	11,744	5	2	-	-	-	-	-	-
Framingham,	11,698	6	-	1	-	-	-	1	-
Southbridge,	11,630	6	1	1	-	1	-	-	-
Wakefield,	10,903	-	-	-	-	-	-	-	-
Webster,	10,825	-	-	-	-	-	-	-	-
Arlington,	10,307	3	-	-	-	-	-	-	-

Recapitulation.

Total of reporting towns, .	2,318,465	768	299	273	54	57	8	28	2
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WEEKLY RETURNS OF DEATHS FROM CERTAIN INFECTIOUS DISEASES.

DEATHS FROM INFECTIOUS DISEASES NOT SPECIFICALLY MENTIONED IN ABOVE TABLES DURING THE WEEKS OF SEPTEMBER 5, 12, 19 AND 26, 1908.

DISEASE.	Place.	WEEK ENDING —			
		Sept. 5.	Sept. 12.	Sept. 19.	Sept. 26.
Cerebro-spinal meningitis, .	Boston,	2	—	1	2
	Gloucester, . . .	—	—	—	1
	Northampton, . .	—	—	—	1
	Pittsfield,	1	—	—	—
	Somerville,	—	—	—	1
	Waltham,	—	—	—	1
	Worcester,	—	1	1	—
Erysipelas,	Boston,	—	1	2	1
	Haverhill,	1	—	—	—
	Medford,	—	—	1	—
Scarlet fever,	Malden,	—	1	—	—
	New Bedford, . . .	—	1	—	—
	Worcester,	1	1	—	1
Whooping cough,	Beverly,	—	—	1	1
	Boston,	7	2	3	—
	Cambridge,	—	1	—	1
	Fall River,	—	—	1	—
	Haverhill,	1	—	—	—
	New Bedford, . . .	—	2	—	—
	Newton,	1	—	—	—
	Worcester,	—	1	—	—
Tuberculosis, other than pulmonary.	Gardner,	—	—	1	—
	Lynn,	—	—	1	—
	Salem,	—	—	—	1
	Springfield, . . .	—	—	—	1

WEEKLY RETURNS OF CASES OF INFECTIOUS DISEASES.

CASES OF INFECTIOUS DISEASES REPORTED DURING THE WEEKS OF SEPTEMBER 5, 12, 19 AND 26, 1908.

[Under the provisions of section 52 of chapter 75 of the Revised Laws.]

	WEEK ENDING —			
	Sept. 5.	Sept. 12.	Sept. 19.	Sept. 26.
Diphtheria,	131	124	150	222
Measles,	18	29	29	28
Scarlet fever,	93	98	80	130
Typhoid fever,	158	125	144	139
Tuberculosis, pulmonary,	95	125	140	136
Cerebro-spinal meningitis,	3	1	2	4
Whooping cough,	22	31	13	25
Varicella,	—	1	3	10
Ophthalmia neonatorum,	—	1	1	1
Tracoma,	—	2	—	—
Smallpox,	—	—	1	—

MONTHLY REPORT ON INSPECTION OF FOOD AND DRUGS.

The following summary presents the results of the examination of food and drugs made by the State Board of Health during the month of September, 1908: —

ARTICLES EXAMINED.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.	ARTICLES EXAMINED.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.
Butter,	2	—	2	Malt liquors,	2	—	2
Canned goods,	2	—	2	Milk,	209	50	259
Cheese,	—	4	4	Pig's feet,	1	—	1
Cider,	4	—	4	Sausages,	3	—	3
Cocoa,	1	—	1	Salad dressing,	1	—	1
Condensed milk,	1	—	1	Spices,	4	—	4
Cream,	24	1	25	Syrup,	—	1	1
Cream of tartar,	1	—	1	Table sauce,	1	—	1
Drugs,	62	8	70	Vanilla extract,	—	1	1
Ginger ale,	1	—	1				
Grape juice,	6	—	6	Total,	325	65	390

The samples of drugs found to be adulterated were lime water, whiskey and several proprietary medicines.

The cities and towns in which samples were collected were: Acton, Agawam, Ashby, Attleborough, Ayer, Bedford, Beverly, Billerica, Boston, Cambridge, Chelsea, Chicopee, Concord, Fitchburg, Grafton, Hyde Park, Ipswich, Lawrence, Lowell, Lynn, Marblehead, Needham, Oak Bluffs, Reading, Salem, Taunton, Westborough, Westford and Woburn.

PROSECUTIONS FOR VIOLATIONS OF THE LAW RELATING TO FOOD AND DRUGS.

Eighteen convictions were secured during the month of September, 1908, for selling adulterated food and drugs and preparations containing cocaine, as follows:—

No.	Name of Defendant.	Place.	Character of Article sold.
1	James L. Mooney,	Boston,	Cocaine. ¹
2	James L. Mooney,	Boston,	Cocaine. ¹
3	Bill Anastas,	Tyngsborough, . .	Milk (total solids, 10.09). ^{2, 3}
4	Carl Anderson,	East Bridgewater, .	Milk (total solids, 10.16). ²
5	Carl Anderson,	East Bridgewater, .	Milk (total solids, 9.98). ⁴
6	Manuel S. DeBettencourt,	Oak Bluffs,	Milk (total solids, 11.66). ²
7	William J. Biggerstaff,	Billerica,	Milk (total solids, 11.10). ²
8	Andrew Dawes,	Cambridge,	Milk (total solids, 11.56). ²
9	Chas. A. Lawrence,	Northborough, . .	Milk (total solids, 11.30). ²
10	Frank Lawrence,	Dedham,	Milk (total solids, 11.60). ²
11	John Mickola,	Ashby,	Milk (total solids, 10.84). ²
12	George H. Howe,	Bedford,	Milk (total solids, 11.43). ²
13	John Seppola,	Ashby,	Milk (total solids, 10.83). ²
14	Boston Dairy Company,	Boston,	Misuse of milk cans. ³
15	Boston Dairy Company,	Boston,	Misuse of milk cans. ³
16	Boston Dairy Company,	Boston,	Misuse of milk cans. ³
17	Frank E. Shea,	Boston,	Olive oil (cotton-seed oil).
18	William J. Biggerstaff,	Billerica,	Obstruction.

¹ Committed.

² Producer.

³ Appealed.

⁴ Watered.

Fines imposed, \$334.

LIST OF ADULTERATED OR IMPROPERLY LABELLED FOODS, ETC., FOR SEPTEMBER, 1908.

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
8152	Feinster Himbeer Syrup,	Berlin-Werdersche Früchteconserven-Fabrik Mor a l, Berlin, Ger. MacLaren Imperial Cheese Company, Ltd., Detroit, Mich., U.S.A., and Toronto, Can. Canney & Frost, Brookline, N. H., George B. Hill, Page's Block, Ayer, Mass.,	Contains .02 per cent. salicylic acid.
8235	MacLaren's Imperial Cheese.		Preserved with a compound of boron; improperly labelled.
3047 P	Five Minute Headache Powders.		Contained acetanilide.
3073 P	Caff-Analid Headache Powders.		Contained acetanilide; improperly labelled.
q 986	Milk,	Thaddeus Fowler, Agawam, Mass.,	Total solids, 10.90 per cent.
q 987			Total solids, 9.62 per cent.
q 988			Total solids, 10.52 per cent. } contained added water. Total solids, 10.00 per cent. }
q 989			
q 990			
8341	Milk,	Michael Beaufregard, West Springfield, Mass.,	Total solids, 11.68 per cent.; fat, 2.20 per cent. skimmed milk.

INSPECTION OF DAIRIES.

During the month of September, 1908, 207 dairies were examined in the following places:—

PLACE.	Number examined.	Number found to present no Objectionable Features.	Per Cent.	Number to which Letters were sent.	Per Cent.
Belmont,	—	—	—	—	—
Second inspection,	7	6	85.71	1	14.29
Cambridge,	8	5	62.50	3	37.50
Second inspection,	8	6	75.00	2	25.00
Concord,	—	—	—	—	—
Second inspection,	1	1	100.00	—	—
Lexington,	1	—	—	1	100.00
Littleton,	—	—	—	—	—
Third inspection,	1	—	—	1	100.00
Marlborough,	33	15	45.45	18	54.55
Second inspection,	43	10	23.26	33	76.74
Third inspection,	1	1	100.00	—	—
Newton,	—	—	—	—	—
Second inspection,	1	—	—	1	100.00
Scituate,	1	—	—	1	100.00
Second inspection,	1	—	—	1	100.00
Somerville,	—	—	—	—	—
Second inspection,	7	7	100.00	—	—
Waltham,	17	9	52.94	8	47.06
Second inspection,	33	16	48.48	17	51.52
Watertown,	2	—	—	2	100.00
Second inspection,	11	7	63.64	4	36.36
Third inspection,	2	1	50.00	1	50.00
Weston,	5	5	100.00	—	—
Second inspection,	24	17	70.83	7	29.17

Total number of dairies examined,	207
Number found to be free from objectionable conditions,	106
Number to which letters were sent,	101
Total number of conditions to which attention was called,	321
Percentage of dairies which passed inspection,	51.21

The names of the owners of dairies found to be worthy of commendation follow:—

Belmont.

Hall, Charles ^{1,2}	Kendall, J. S. ¹	Quigley, Mrs. Edward ^{1,2}
Henry, John W. ^{1,2}	Parks, Charles ¹	Ryan, Dennis ^{1,2}

Cambridge.

Barry, Mrs. Patrick	Keefe, Dennis ¹	Reardon, Edmund
Costello, Richard	McHugh, John ¹	Sullivan, J. T. ^{1,2}
Dowey, Mrs. Agnes	Merrill, F. P.	White, Edward ¹
Jennings, C. T. ^{1,2}	Printon, Robert T. ^{1,2}	

¹ Second inspection.

² Reported favorably on first inspection as well.

*Concord.*Albree, George ^{1, 2}*Marlborough.*

Alden, V. I.
 Ames, E. P. ¹
 Bell, F. P.
 Blanchette, Joseph P. ¹
 Brigham, E. A.
 Browne, Marcus M. ^{1, 2}
 Curtis, Charles W.
 Dunn, William S. ¹
 Felton, E. A. ¹

Frye, John A. ³
 Gage, George
 Giles, J. W.
 Hagar, G. W. ^{1, 2}
 Hagar, J. A. ¹
 Howe, Elmer D. ^{1, 2}
 Huntington, H. R. ^{1, 2}
 Mace, William ¹
 McGrath, Michael

Moulton, E. C. ¹
 Peloquin, Charles H.
 Proctor, Frank
 Sawyer, T. T.
 Shaughnessy, Jeremiah ^{1, 2}
 Sherman, E. P. ¹
 Thirlby, George W. ¹
 Walker, Joseph ¹

Somerville.

Elliott, F. R. ¹
 Ford, Eugene J. ¹
 Hoar, Daniel ¹

Hunt, Mrs. Ellen J. ^{1, 2}
 Monahan, E. M. ¹

Sheehan, Mrs. Mary J. ¹
 Wilson, Mrs. Delia ¹

Waltham.

Baker, Dr. William H.
 Baldwin, James W.
 Belcher, Harry
 Childs, Frank E.
 Clark, Eliza ¹
 Collins, Michael ¹
 Cunningham, Thomas ^{1, 2}
 Cutting, Joseph ^{1, 2}
 Davis, Prescott

Doyle, John F. ¹
 Emerson, Edward B.
 Ford, John W. ¹
 Haron, J. A. ¹
 Jackson, Mrs. George ^{1, 2}
 Kennealy, J. B. ¹
 Lawrence, Phineas
 Pratt, Henry

Runkle, John C. ^{1, 2}
 Sanderson, Horace
 Slouenwhite, J. A. ¹
 Smith, C. F. ^{1, 2}
 Smith, Nathan ^{1, 2}
 Stearns, Estate of Amos ¹
 Viles, Charles L. ^{1, 2}
 Wellington, Edward ¹

Watertown.

Bleiler, Fred ¹
 Brown, Ellen ^{1, 2}
 Clements, Ralph ^{1, 2}

Howard, Henry M. ^{1, 2}
 Pierce, Charles ^{1, 2}
 Ramsley, Robert ^{1, 2}

Steele, A. T. ³
 Whitney, Estate of B. ¹

Weston.

Blood, G. A. ¹
 Card, J. L. ¹
 Coburn, A. E. ^{1, 2}
 Coburn, A. L. ^{1, 2}
 Dudley, A. L.
 Fiske, N. S. ^{1, 2}
 Fuller, Mrs. Moses ^{1, 2}
 Garfield, A. H. ¹

Harrington, H.
 Irving Bros. ¹
 Jennings, Edward ^{1, 2}
 Lamson, George ^{1, 2}
 Merriam, Charles ^{1, 2}
 Merriam, H.
 Richardson, H. C. ¹

Ripley, F. P. ¹
 Russell, H. G.
 Viles, Henry ¹
 Vittum, D. B. ^{1, 2}
 Walker, Grant ^{1, 2}
 Welcome, G. H.
 Weston Town Farm ^{1, 2}

¹ Second inspection. ² Reported favorably on first inspection as well. ³ Third inspection.

EXPERIMENTAL RESEARCHES IN TUBERCULOSIS, WITH SPECIAL REFERENCE TO ETIOLOGY, PATHOLOGY AND IMMUNITY.¹

By THEOBALD SMITH, M.D., *George Fabyan Professor of Comparative Pathology, Harvard Medical School; Pathologist of the Massachusetts State Board of Health.*

Activities which belong to the field of medical science may be grouped into researches concerned with the nature and causation of pathologic phenomena, and those concerned with the application of the knowledge disclosed to the prevention and treatment of disease.

To trace these activities over a definite geographic area, such as a State, is difficult, for research in any subject which concerns the population of the world goes on simultaneously in many places. The stream of research activities is continuous only when we bring into our view the entire civilized world. When we view a small territory, it is more like examining separate brooks having no connection with one another, which, however, eventually contribute to the main stream. These researches emanate largely from laboratories, and are experimental in character. They differ from those of practical medicine only in so far as the conditions under which the special problems of disease are being investigated are either known, or else controlled or carefully balanced by unknown factors of presumably equal value. This use of controls is the more extended, the larger the number of unknown elements which enter into the problem. It is either impossible or possible only through the use of statistics or the accumulation of numbers of cases that the practice of medicine can control its work. Beyond this there is no fundamental distinction, nor even any sharp dividing line between experimental and clinical medicine. One insensibly shades into the other by gradations. The hope of continued and greater success in the limitation of disease lies in slowly pushing the methods of experimental medicine into clinical work. This has been going on to a very large extent by the development of hospital laboratories. Laboratory activities on a large scale are co-extensive with the modern era of bacteriology, and this in turn has as its chief starting point the discovery of the tubercle bacillus by Koch in 1882.

These activities are grouped in the main around three epochs in the development of our knowledge of tuberculosis,—the discovery of the tubercle bacillus, the introduction of tuberculin as a curative and diag-

¹ Reprinted from the volume entitled "Tuberculosis in Massachusetts," by courtesy of the Massachusetts State Committee for the International Congress on Tuberculosis, Washington, D. C., 1908.

nostic agent, and the differentiation of the races of mammalian tubercle bacilli provisionally into human and bovine. Each event acted as a stimulus, aroused the waning interest in the nature and activities of the tubercle bacillus, and supported the flagging hope for the discovery of some easily applied curative or immunizing agent.

The period preceding the discovery of the tubercle bacillus was devoted chiefly to the macroscopic and microscopic study of the tubercle, and to speculations concerning its origin and nature. Though the infectious properties of tuberculous matter had been demonstrated by Klencke in 1843 and again by Villemin in 1865, yet the conception of infection from without with reference to this disease did not seem to flourish or to lay hold of medical thinking.¹

Among the writings emanating from Massachusetts during the period preceding the discovery of the tubercle bacillus perhaps one may be mentioned, as it is based upon macroscopic and microscopic examination of tuberculous and other tissue from 16 cases. I refer to the Boylston prize essay of Calvin Ellis, entitled "Tubercle: Its Pathology and especially its Relation to Inflammation."² Ellis described the macroscopic and microscopic characters of "gray and yellow" tubercle, its chemical characters and metamorphoses. He discussed its distribution in the body and the diseases which are incompatible with it. With the aid of quotations from the writings of Virchow, Reinhardt and Spiess, he analyzes the tuberculous process and comes to the following conclusions:—

It [tubercle] is not a specific exudation.

It does not exist as such in the blood.

The yellow variety is always the result of metamorphosis — of degeneration.

It is altogether probable that it is owing to a "degraded condition of the nutritive material," which differs from that furnished under ordinary circumstances, "not in kind, but in degree of vitality or capacity for organization."

The selection and grouping of publications emanating from Massachusetts since the discovery of the tubercle bacillus has been a task of considerable difficulty. Only those papers have been chosen which presented evidence of laboratory work done, as contrasted with clinical work, to support the statements made and conclusions reached. This rule of choice reduced the available material to a relatively small amount.

As regards the order of presentation, it was found impracticable to deal with the publications chronologically or with reference to the three epochs mentioned above, and it was deemed best to bring together those which are logically related to one another.

¹ R. H. Fitz, "The Theory of Tuberculosis," Massachusetts Medical Society, 1871.

² American Journal Medical Sciences, 1860, N. S., XXXIX, 339.

The review of each paper has been purposely made short, and the author's conclusions cited wherever possible. Critical comments have been withheld excepting where the results were open to doubt and at the same time of great practical significance. The writer has a vague presentiment that papers have been overlooked which should have been included in this chapter's summary, but he hopes that the neglected authors will be lenient with him for his shortcomings.

ETIOLOGY OF TUBERCULOSIS.

The Morphology and Biology of the Tubercle Bacillus.

The early work on the relation of the tubercle bacillus to tuberculosis, its morphology and cultivation and the methods used for staining it, was designed largely to repeat and confirm the original work of Koch, and to acquaint the medical profession with the laboratory methods used by him and the inferences and conclusions drawn by him from his experiments. This period has little originality to show. The progress made by Koch over his contemporaries in almost everything undertaken by him, his original and advanced points of view and his new methods of research left all far behind. Koch had so thoroughly covered the field that it required years to discover any untilled corners. Moreover, laboratories were just being created. Apparatus had to be improvised, contrived or newly invented to meet the sudden expansion of bacteriological methods.

Harold C. Ernst¹ describes his experience with the different staining methods then in use and gives formulæ for each. He gives his preference to the Koch method. He also describes the method for procuring pure cultures of the bacillus of tuberculosis, following Koch's directions as closely as possible, and cites a list of the pathological material submitted to microscopic examination. Guinea pigs were also inoculated. The entire work is in a sense a repetition and confirmation of a portion of Koch's original investigation.

E. W. Cushing² gives an exhaustive summary of Koch's original monograph on the bacillus of tuberculosis. In a second paper³ an account of the methods of staining the bacilli and the manipulation of the microscope for their detection is given.

A similar paper was published by W. F. Whitney.⁴

The pathology of cutaneous tuberculosis was discussed by John T. Bowen⁵ with special reference to miliary tuberculosis of the skin, scrofu-

¹ American Journal Medical Sciences, 1884, LXXXVIII, 367.

² Boston Medical and Surgical Journal, 1885, CXIII, 533.

³ *Ibid.*, 1886, CXIV, 277.

⁴ "The Etiology of Tuberculosis," Riverside Press, Cambridge, 1882.

⁵ Boston Medical and Surgical Journal, 1891, CXXV, 516.

loderma, lupus and tuberculosis verrucosa cutis. The pathological anatomy of these lesions is carefully described with reference to the primary seat of the lesion, the formation of the specific tuberculous tissue, the degenerations and regenerations associated with it.

A similar paper was published by C. J. White¹ in 1905. Dr. White's treatment of the subject approaches the clinical, and is descriptive of the various well-determined and debated forms of skin tuberculosis. Inasmuch as the descriptions are limited to the naked-eye appearances, the paper belongs more properly among the clinical contributions.

The resistance of tubercle bacilli to destruction by drying has been of great interest to sanitarians, in view of the current theory that pulmonary tuberculosis is largely an inhalation disease.

In 1890 A. K. Stone² tested on rabbits three lots of sputum in which tubercle bacilli had been demonstrated about three years before. The sputum remained on "the laboratory shelves quiet and undisturbed" during this long period. When it was used upon rabbits, the sputum was represented either by a little dry dust or else by a hard brown crust covering the bottom of the jar. The notes on the inoculated rabbits suggest local tuberculosis of limited extent. The proof that tubercle bacilli may survive so long under the conditions mentioned should have been strengthened by either cultures or subinoculations from the original rabbits, since the results are at variance with those of other investigators.

The thermal deathpoint of tubercle bacilli was investigated by the writer³ primarily to determine any possible differences in this respect between the human and bovine types. No differences were discovered, but earlier observations were rectified by demonstrating that the tubercle bacillus is killed in fluids by twenty minutes' exposure at 60° C., and that former discrepancies are accounted for by the fact that in milk a pellicle forms which protects the bacilli from the heat. By heating milk in closed vessels this difficulty is eliminated.

TUBERCULIN.

Infection and Immunity.

The second era or epoch in the investigation of tuberculosis was ushered in with the announcement in 1890 that a cure for tuberculosis had been discovered by Koch. Again a number of publications appeared, but they were chiefly the results of observations made on patients to test the statement of Koch that tuberculin was curative. Slowly the tide turned against this new substance, for good and obvious reasons, for Koch had simply discovered what would now be called an instance of

¹ Boston Medical and Surgical Journal, 1905, CLIII, 291.

² American Journal Medical Sciences, 1891, CI, 275.

³ Journal Experimental Medicine, 1899, IV, 217.

anaphylaxis or the sensitization of the human being, by virtue of infection, to certain extracts of the tubercle bacillus. The immense impetus given to research by this and the nearly contemporaneous discovery of antitoxin by von Behring brought into the foreground for investigation the problem of immunity, of which the tuberculin reaction was but a fragment. This great problem, long nurtured by the genius of Pasteur, slumbered elsewhere until awakened by these great discoveries. Even after seventeen years, immunity still presents subsidiary problems of the greatest importance to the science of biology and to the practice of medicine.

Belonging to this period there is one paper which should be mentioned here. J. A. Jeffries¹ made extracts of tubercle bacilli with alcohol, ether, chloroform and benzol, as well as glycerine. Tuberculous guinea pigs were made very sick with the latter. The series of experiments was interrupted by an accident. This paper was in line with Koch's work, but unfortunately was not completed.

Among the papers belonging to this chapter, but published at a much later date, the following embody considerable laboratory work. A painstaking investigation on the effect of tuberculins made from human and bovine tubercle bacilli was published by S. B. Wolbach and Harold C. Ernst² in 1904. Cultures were freshly isolated directly from the respective hosts, and tuberculin made in the usual way. The relative virulence of the human and the bovine culture was first determined in rabbits and guinea pigs. The tuberculins were next tested on tuberculous guinea pigs, and it was found that both acted alike upon guinea pigs infected with human or bovine bacilli. Finally, inoculated guinea pigs were treated with small doses of tuberculin. Eighteen were inoculated with human and an equal number with bovine bacilli. One-half of each set was treated with human, the other half with bovine, tuberculin. The results were more or less conflicting, but it was noticed that many treated guinea pigs gained in weight and in some the local ulcer healed. The contents of the local inoculation abscess also discharged more rapidly and completely in the treated than in the control animals. The inference was that the tuberculin treatment on the whole acts favorably upon tuberculous guinea pigs.

In a paper presented before the Harvey Society of New York, the writer³ goes into the subject of infection and immunity in tuberculosis. He discusses the portals of entry, and points out the fact observed by him in a large number of autopsies in 1893, that in cattle the primary foci of infection are the regional lymph nodes of the throat, the lungs and the

¹ Boston Medical and Surgical Journal, 1891, CXXVI, 185.

² Journal Medical Research, XII, 295.

³ Journal American Medical Association, 1906, XLVI, 1247 and 1345.

small intestines, and only very rarely the organs or mucous membranes through which the bacilli must pass to the lymph nodes. The action of dead tubercle bacilli and of tuberculin is discussed on the basis of a large series of experiments on guinea pigs by him, and the earlier experiments of Straus, Prudden and others. Lastly, the problem of vaccination with tubercle bacilli killed at 60° C. is taken up and recommended as a means of suppressing the disease.

In recent years the suppression of bovine tuberculosis by means of vaccination has been strongly advocated by von Behring, and a method developed by him on a commercial scale which has been applied in many countries. The desire to obtain first-hand information concerning the efficacy of this method led the Massachusetts Society for Promoting Agriculture to grant the writer a certain sum of money to carry on a series of vaccination tests on calves.¹

The outcome of these investigations demonstrated, as had been done by Koch and co-workers in Germany, that almost any human type of tubercle bacillus could be used in place of the bovovaccine, and that the vaccine could be easily and cheaply prepared by those who were acquainted with the chief characters of the human tubercle bacillus. It was also clearly shown that the immunity due to two injections of suspensions of human bacilli is not quite high enough, and the writer suggests for valuable animals a third injection of attenuated bovine bacilli.

PUBLIC-HEALTH ASPECTS OF TUBERCULOSIS.

Transmission from Man to Man and from Animals to Man.

The presence of tubercle bacilli in the milk of tuberculous cows with apparently normal udders was investigated by Harold C. Ernst,² assisted by Drs. Austin Peters, Henry Jackson and L. Frothingham. Tubercle bacilli were seen in coverslip preparations of the milk of 12 out of 36 cows. By inoculation of guinea pigs, tubercle bacilli were detected in the milk of 6 out of 15 cows. By the inoculation of rabbits, the milk of 4 out of 19 cows was found infected with tubercle bacilli. Feeding experiments were also instituted on a large scale with calves, pigs and rabbits, with results corroborating those obtained by inoculation.

At the same time samples of milk and cream from the supply of the city of Boston were subjected to microscopic examination and inoculation. The results were as follows: in 33 samples, tubercle bacilli were detected with the microscope once, and three times in inoculated rabbits. The rest of the volume contains letters from practitioners bearing upon

¹ Journal Medical Research, 1908, XVIII, 451.

² American Journal Medical Sciences, 1889, XCVIII, 439; "Infectiousness of Milk," 1894, 141, 17 plates.

clinical observations of tuberculosis traceable to the milk supply. As this portion is of clinical rather than scientific value, it does not come within the scope of this chapter. The conclusions reached by the author are as follows:—

1. While the transmission of tuberculosis by milk is probably not the most important means by which the disease is propagated, it is something to be guarded against most carefully.

2. The possibility of milk from tuberculous udders containing the infectious element is undeniable.

3. With the evidence here presented, it is equally undeniable that milk from diseased cows with no appreciable lesion of the udder may, and not infrequently does, contain the bacillus of the disease.

4. Therefore, all such milk should be condemned as food.

Dr. F. T. Lord contributes an important article on flies and tuberculosis.¹ As the result of laboratory experiments with flies, in which feeding of sputum was practised and the fly-specks studied, the following conclusions were reached:—

1. Flies may ingest tubercular sputum and excrete tubercle bacilli, the virulence of which may last at least fifteen days.

2. The danger of human infection from tubercular fly-specks is by the ingestion of the specks on food. Spontaneous liberation of tubercle bacilli from fly-specks is unlikely. If mechanically disturbed, infection of the surrounding air may occur.

As a corollary to these conclusions, it is suggested that:—

3. Tubercular material (sputum, pus from discharging sinuses, fecal matter from patients with intestinal tuberculosis, etc.) should be carefully protected from flies, lest they act as disseminators of the tubercle bacilli.

4. During the fly season, greater attention should be paid to the screening of rooms and hospital wards containing patients with tuberculosis, and laboratories where tubercular material is examined.

5. As these precautions would not eliminate fly infection by patients at large, food stuffs should be protected from flies who may already have ingested tubercular material.

THE INTERRELATION OF HUMAN AND ANIMAL TUBERCULOSIS.

Variation among Tubercle Bacilli.

The identity of tubercle bacilli isolated from cattle and man had been regarded as definitely established by the great work of Koch published in 1884. Ten years later, sanitary measures based upon this assumed identity and the discovery of tuberculin as a diagnostic agent were in

¹ Boston Medical and Surgical Journal, 1904, CLI, 651.

force in all civilized countries. In some the zeal to wipe out bovine tuberculosis obscured for a time the more important issue of the transmission of tuberculosis from man to man, when it became known through the use of tuberculin to what extent cattle were infected with tuberculosis. The discovery of Maffucci, that the tubercle bacillus of birds was a distinct race or variety, had been accepted by Koch himself.

That bovine and human bacilli are not identical had occurred to the writer in studying the inoculation disease in guinea pigs. In 1894-95 two cultures, one from cattle, and one presumably, though indirectly, of human origin, were studied in Washington, D. C., and tested in cattle, and such great differences discovered that further studies were at once begun. This first communication was not published until 1896, but the subject began to arouse some interest and considerable opposition. L. Frothingham¹ investigated the subject for the Massachusetts Cattle Commission, and published his results in 1897.

A culture of human bacilli was used, isolated from the liver of a child, and about one year old. Two calves, three months and three weeks old respectively, received suspensions of the culture into the peritoneal cavity. In both only slight local nodules were produced, some resembling spontaneous tubercle, others tending towards granulation tissue. Two calves, three weeks and two months old respectively, were inoculated into the trachea. In one case the large local abscess in the muscles of the neck indicated a deposit there of much of the material destined for the lungs. In the liver and lungs a small number of minute tubercles, practically devoid of tubercle bacilli, were found. In the other calf lesions were absent. Thus, in spite of the immature age of these animals, the tubercle bacillus may be said to have had but a trifling local effect on them. The tests on guinea pigs indicate a very attenuated culture.

In a second experiment human sputum containing many bacilli was inoculated under the skin of one calf and into the trachea of two others. The animals were killed four to five months after inoculation. The subcutaneous inoculation was apparently negative. In the others the lungs were normal, the muscular tissue around the trachea was slightly involved, but there was no active, progressive disease from this focus.

From present knowledge of the effects of bovine tubercle bacilli on young calves, we may say that neither the pure culture nor the sputum inoculated by Frothingham contained bovine bacilli.

In 1898 the writer² published the second paper on the comparative study of human and animal tubercle bacilli. This investigation included

¹ Annual Report Board of Cattle Commissioners of the Commonwealth of Massachusetts, January, 1897, 49. Translated in *Ztschr. f. Tiermedizin*, 1897, I, 330.

² *Journal Experimental Medicine*, 1898, III, 451.

seven cultures from man, five from cattle, and one each from a pig, a cat and a horse. It consisted of a study of the morphological and cultural characters of the bacilli, of their pathogenic action on guinea pigs, rabbits, mice, pigeons and cattle, and of the histological character of the lesions produced. Throughout an effort was made to have the study of cultures from human and bovine sources run parallel. Only in this way could any satisfactory basis for comparison be established.

Inasmuch as in this paper the writer has formulated nearly all the problems which have since then occupied the attention of investigators in many countries, its contents are best reviewed by a few direct quotations: —

The foregoing experiments, while they show unmistakably the close relationship existing among the various cultures studied, nevertheless justify us, if only to guide and stimulate further study, in establishing a distinctively human or sputum and a bovine variety of the tubercle bacillus. It might be better to omit the host designation of such varieties, in order to anticipate assumptions that they are necessarily limited to the host whose name they bear. Still, the convenience of using the host's name is so great that I shall succumb to it. The characters upon which the bovine variety may be based reside, morphologically, in the invariably short, straight form and in the greater resistance of this form to modifying influences of culture-media; biologically, in a greater resistance to artificial cultivation and in a much greater pathogenic activity towards rabbits, guinea pigs and cattle.

There is proof, furthermore, of the existence of slightly varying characters even within the varieties proposed. Among the bovine forms studied, slight variations in virulence were noticeable. Among the sputum forms, variations in size, in capacity for cultivation, and in pathogenic activity have been observed.

Putting all the facts obtained by experiments upon cattle together, it would seem as though the sputum bacillus cannot gain lodgment in cattle through the ordinary channels. These avenues, well provided with protective mechanisms, receive the bacilli probably one at a time. However closely the sputum and the bovine bacillus may be related, it seems as if under ordinary circumstances the former would fall an easy prey to destruction. This inference will gain in weight if we bear in mind that the far more potent bovine bacillus produces in at least 50 per cent. of the spontaneously infected cattle a purely local disease, which probably would remain so if the animal were surrounded with favorable conditions.

The second and most important proposition, the transmission of bovine bacilli to the human subject, has been much discussed in recent years, without, however, bringing us any nearer to definite knowledge.

If bovine bacilli may invade the human body without let or hindrance, we have not only food infection through milk and milk products to guard against, but also the inhalation disease to which men are exposed in stables containing tuberculous cattle. What proportion of tuberculous subjects may derive their infection from these sources we do not know. Now that we have established some fairly pronounced differences between bovine and sputum bacilli, the whole discussion

might be cut short by the suggestion that the time has come to stop citing old and doubtful cases, and to go to work to study with care the tubercle bacilli from cases of supposed animal origin, so that some experimental, trustworthy basis may be formed upon which to found statistics.

While this is in truth what will have to be done, and is the goal which has been aimed at from the outset in this tedious work, it will take much time and persistent attention to collect evidence of this kind. In the mean time, the relation of bovine to human tuberculosis must be somehow defined before a fairly helpless and frightened public. It seems to me that, accepting the clinical evidence on hand, bovine tuberculosis may be transmitted to children when the body is overpowered by large numbers of bacilli, as in udder tuberculosis, or when certain unknown favorable conditions exist. To prevent this from occurring, a rigid periodic dairy inspection and the removal of all suspicious udder affections and all emaciated animals is as much as public health authorities can at present demand. Any measures beyond these belong to agriculture, with which the public health has no business to meddle, without endangering the chances of gaining authority to enforce its own necessary measures. If the evidence gained by pathology in the future should reveal a greater danger than is here assumed, the scientific basis of such evidence will, I think, force all additional measures needed.

But for the student of etiology the problem does not end in the differentiation of varieties. It reaches out much farther than this, and involves some puzzling questions. The most important one bears on the possible changes which the tubercle bacillus may undergo during its prolonged sojourn in the human body. I have already referred to one phase of this question in mentioning the saprophytic growth of the sputum bacillus in the affected lungs and necrotic tissue, as contrasted with its slight multiplication in living tissue and with the generally slight multiplication of the bovine bacillus in the tissue of cattle. This question is a very complicated one, and nothing is easier than to reason in a circle about it, because of the entire absence of data. The first hypothesis to be considered is that which assumes the conversion of the bovine bacillus into the sputum bacillus in the human body. . . .

The question of phthisis as secondary to infection by way of the digestive organs is, however, one needing more attention, for experimental results in this direction are quite suggestive. In all mammals the lungs are evidently the most favored place of tubercle bacilli, and wherever the latter may be deposited, they sooner or later, unless the disease is checked, reach that organ, where the process spreads more rapidly than elsewhere. This march from the place of infection is not infrequently partially concealed by reparative processes. . . .

With the two facts before us that tubercle bacilli gravitate, as it were, towards the lungs in all the susceptible mammals, and that they may conceal their movements in the body quite effectually, we must regard infection through the digestive tract as a source of phthisis at least deserving more attention. The only question to interest us here is the relation of the bovine bacillus to this process. . . .

Only much painstaking work will enable us to learn whether the human body can produce such a great modification of the bovine bacillus or not.

If in this brief summary I have presented nothing but problems to be solved and doubts to be entertained, I feel quite confident that the comparative study of tubercle bacilli will lead to some definite understanding on certain important questions, and eventually to more light on the whole subject of tuberculosis, from the preventive as well as the therapeutic side.

The main questions proposing themselves to the investigator are: —

1. The study of tubercle bacilli from different types of tuberculosis, to determine their relation to the sputum bacillus and the bovine bacillus as regards virulence.

2. The study of the bacilli in primary intestinal disease and in all tubercular disease in children in which the source of infection is assumed to be outside of the family and possibly in the milk.

The work of studying tubercle bacilli from different sources was continued as opportunity presented itself until 1907. It was then taken up in the writer's laboratory by Dr. P. A. Lewis, who has succeeded in isolating and studying from all points of view cultures from 15 cases of tuberculous cervical and mesenteric lymph nodes in children. As this work will probably appear before the close of the present year (1908), further comment is unnecessary. In the papers of the writer¹ which have thus far appeared, there have been studied, in all, 24 human, 9 bovine, 3 cat, 1 dog, 2 swine, 1 horse and 1 Coati culture. Among the 24 cultures from man, 5 were regarded as of bovine origin. Two of these were from mesenteric lymph nodes, 3 from tonsils and cervical lymph nodes.

In one of the papers a reaction is described which enables us to divide all tubercle bacilli into two classes: first, those which produce a final alkaline or neutral reaction to phenolphthalein in glycerin bouillon; and second, those which produce a final acid reaction. Bovine cultures thus far examined have belonged to the first group, most human cultures to the second. Those human cultures which belonged to the first group possessed also other characteristics of the bovine type, and the infection of the cases was assumed to be from the milk.

The existence of varieties of the human tubercle bacillus as well as of the bovine bacillus was observed by the writer and by all investigators who studied carefully series of cultures. This subject of variation among tubercle bacilli is reviewed by the writer² in a general way in a short paper in 1899.

The relation existing between bovine and human tuberculosis is one of great importance to the public health, because of the excessive use of cows' milk in infancy and in various states of disease and invalidism.

¹ Notes on a tubercle bacillus having a low degree of virulence, *Journal Boston Society Medical Sciences*, November, 1898. Studies in mammalian tubercle bacilli, III, *Transactions Association American Physicians*, 1903, and *Journal Medical Research*, 1905, XI, 253. A study of tubercle bacilli isolated from three cases of tuberculosis of the mesenteric lymph nodes, *American Journal Medical Society*, 1904, August. Studies in mammalian tubercle bacilli, IV, *Journal Medical Research*, 1907, XVI, 435 (with Mr. Herbert R. Brown). The reaction curve of tubercle bacilli from different sources in bouillon containing different amounts of glycerin, *Journal Medical Research*, 1905, XI, 405.

² *Boston Medical and Surgical Journal*, 1899, January 12.

The writer ¹ summarized the relationship as deducible from reports of investigations in 1902 and 1907.

In these papers he takes a middle ground, — that there is danger from cows' milk containing tubercle bacilli, but that the danger has been over-estimated. Under the existing conditions he advises thorough sanitary inspection of dairy herds and the eliminating of all cows showing wasting and any doubtful udder affection. In the second paper arguments drawn from comparative pathology and bacteriology are presented to combat the theory of the modification of the bovine into the human type of tubercle bacillus in the human body, and also the tendency to regard pulmonary tuberculosis as started chiefly by bacilli absorbed from the digestive tract. He urges the need of more investigation to clear up definitely the controverted points.

Studies on the morphology of the tubercle bacillus from human and bovine sources were published by S. B. Wolbach and Harold C. Ernst.² By planting cultures on a variety of media, and examining at different intervals of time, they came to the following summary: —

1. The tubercle bacillus undergoes marked changes in morphology with change of culture medium.

2. The microscopic characteristics of a fully developed culture are fairly constant for each medium.

3. Growth for several generations on a given medium has not tended to impart fixed characteristics, the change in form being just as prompt and complete as when transferred after a single generation.

4. These changes cannot be explained by assuming that the sole difference is in the favorability of the medium for the growth of the tubercle bacillus. Both Dorset's egg medium and the brain medium must be classed as extremely favorable ones; growth on each appears at about the same time and progresses about equally rapidly. The reaction of the medium also does not explain these changes, as the different media may have precisely the same reaction and yet these changes occur.

5. The greatest variations in form and staining reaction are found in rapidly growing cultures, and we agree with Coppen-Jones in regard to the conditions best suited for the production of branched and filiform forms, namely, a favorable medium and free access to oxygen.

6. The only interpretation of the great diversity of form assumed by the tubercle bacillus when grown under the most favorable conditions is that it is truly pleomorphic, and should be classed among the higher bacteria.

A similar investigation was made by the writer ³ chiefly for the purpose of finding additional methods for distinguishing the human from the bovine type of bacilli. The impulse to the study was given by the

¹ The Medical News, 1902, LXXX, 343; The Boston Medical and Surgical Journal, 1907, CLVII, 240.

² Journal Medical Research, 1903, X, 313, 13 plates.

³ Transactions National Association for the Study and Prevention of Tuberculosis, 1905, I, 211.

change in the form of bovine tubercle bacilli observed in impure cultures. As soon as the culture was purified the bacilli assumed their original short form. The probable explanation of the phenomenon observed is the softening and increased stickiness of the outer layer or capsule of the bacilli in the impure culture, perhaps under the influence of some bacterial enzyme.

THE ENFORCEMENT OF CERTAIN STATUTES.

RELATIVE TO THE MISUSE OF MILK CANS.

In the two cases of the Commonwealth *v.* The Boston Dairy Company, for delivering or causing to be delivered cans containing kerosene, vegetable matter and other offensive material, the defendants were found guilty by Judge Charles F. Worcester, at Ayer, and were ordered to pay a fine of \$10 in each case; they appealed.

RELATIVE TO THE CLEANLINESS OF A CLOTHING FACTORY AND THE PROVISION FOR RECEPTACLES FOR SPITTING.

The State Inspector of Health of District No. 5 instituted court proceedings against Frank Demark, 42 Beach Street, Boston, for refusing to provide sputum receptacles. The case was tried in the municipal criminal court before Judge Sullivan, September 10. The defendant pleaded guilty, but argued that from the nature of the work done on his premises it was unreasonable to require receptacles for sputum, inasmuch as the garments thrown on the floor might be soiled by them. He stated that he had put in some receptacles for spitting, but that, having spoiled a few garments, he was obliged to remove them. He maintained, further, that his employees did not spit on the floor. In rendering the decision Judge Sullivan ruled that as long as there was no spitting in the shop the sputum receptacles would be so clean that there would be no danger of soiling the garments. The defendant was fined \$25.

The State Inspector of Health of District No. 5 instituted court proceedings against Joseph Leventhal, 188 Hanover Street, Boston, on two counts: (1) for not having his clothing factory clean, (2) for not providing sputum receptacles. The defendant's attorney suggested that, as a fine would be a great hardship for the defendant, the case be placed on file. Judge Bolster argued that placing the case on file might not have as good a moral effect on others engaged in the industry as is desired. He therefore imposed a fine of \$50, — \$25 on each count, and suspended the payment for a year, during which time the defendant is on probation.

RELATIVE TO HUMIDIFYING IN FACTORIES.

The State Inspector of Health of District No. 2 notified the superintendent of a mill in Fall River that the practice of using stagnant and offensive water for wetting filling was not in accordance with the statute relative to the use of water for humidifying purposes in factories. The matter was investigated by the mill authorities, who acknowledged the use of water which gave rise to foul odors, and, at an expense of about \$135, changed the supply to city water.

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WEEKLY RETURNS OF DEATHS FROM CITIES AND TOWNS OF MORE THAN 10,000 POPULATION.

WEEK ENDING OCT. 3, 1908.

CITIES AND TOWNS.	Population, ¹ Esti- mated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —						
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.	
Boston,	617,082	212	75	103	14	48	5	1	1	
Worcester,	134,341	37	10	9	5	1	1	-	-	
Fall River,	106,305	31	11	15	1	1	-	-	-	
Cambridge,	100,922	34	11	12	5	4	-	-	-	
Lowell,	96,380	42	19	13	5	2	-	1	-	
Lynn,	82,661	21	8	5	-	2	1	-	-	
New Bedford,	82,580	31	16	3	3	-	-	-	-	
Springfield,	81,425	22	4	3	1	-	-	1	-	
Lawrence,	78,000	29	12	10	1	1	1	-	-	
Somerville,	74,295	9	5	3	-	1	-	-	-	
Brockton,	53,131	11	3	2	-	-	-	-	-	
Holyoke,	52,652	11	4	6	1	3	-	-	-	
Malden,	40,929	7	-	3	2	-	-	1	-	
Chelsea,	39,363	4	2	1	-	1	-	-	-	
Newton,	38,919	7	3	1	1	-	-	-	-	
Salem,	38,666	10	2	2	1	1	-	-	-	
Haverhill,	38,228	10	2	2	1	-	-	-	-	
Fitchburg,	33,948	5	4	-	-	-	-	-	-	
Everett,	32,415	8	5	1	-	1	-	-	-	
Taunton,	30,967	8	3	3	-	-	-	-	-	
Quincy,	30,924	16	6	4	-	2	1	-	-	
Waltham,	28,120	2	0	-	-	-	-	-	-	
Pittsfield,	27,168	7	1	4	2	-	-	-	-	
Gloucester,	26,011	10	2	2	-	2	-	-	-	
Brookline,	25,825	7	2	1	1	-	-	-	-	
North Adams,	22,150	5	1	-	-	-	-	-	-	
Chicopee,	20,831	5	2	2	1	1	-	-	-	
Northampton,	20,789	5	3	3	2	-	-	-	-	
Medford,	20,605	0	-	-	-	-	-	-	-	
Beverly,	16,088	4	2	1	1	-	-	-	-	
Leominster,	15,578	2	1	-	-	-	-	-	-	
Hyde Park,	15,327	1	1	-	-	-	-	-	-	
Melrose,	15,160	1	0	1	-	1	-	-	-	
Newburyport,	14,794	-	-	-	-	-	-	-	-	
Woburn,	14,492	6	3	1	-	-	1	-	-	
Westfield,	14,457	0	-	-	-	-	-	-	-	
Marlborough,	14,359	4	2	-	-	-	-	-	-	
Revere,	14,248	2	-	1	-	1	-	-	-	
Attleborough,	13,600	3	0	-	-	-	-	-	-	
Peabody,	14,144	-	-	-	-	-	-	-	-	
Adams,	13,375	3	2	1	1	-	-	-	-	
Clinton,	13,105	3	2	-	-	-	-	-	-	
Gardner,	12,794	7	1	2	1	1	-	-	-	
Milford,	12,565	0	-	-	-	-	-	-	-	
Watertown,	12,306	4	2	-	-	-	-	-	-	
Plymouth,	12,149	-	-	-	-	-	-	-	-	
Weymouth,	11,744	5	0	-	-	-	-	-	-	
Framingham,	11,698	4	1	-	-	-	-	-	-	
Southbridge,	11,630	-	-	-	-	-	-	-	-	
Wakefield,	10,903	-	-	-	-	-	-	-	-	
Webster,	10,825	-	-	-	-	-	-	-	-	
Arlington,	10,307	3	-	1	-	1	-	-	-	

Recapitulation.

Total of reporting towns,	2,306,835	658	233	221	50	75	10	4	1
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¹ The populations were estimated upon the rate of growth from 1900 to 1905. Those of Taunton, Gloucester, North Adams and Clinton were allowed to stand as in 1905, having shown no increase during the five-year period. The gain in the population of Lowell is due to the annexation of a part of the town of Tewksbury. The population of Lawrence by the census of 1905 was 70,050, but, owing to the building of the new Wood and Arlington mills, employing at present some 3,000 operatives, an increase of about 8,000 is estimated by the Lawrence board of health, or 78,000.

WEEK ENDING OCT. 10, 1908.

CITIES AND TOWNS.	Population. Estimated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	617,082	216	71	68	18	17	7	1	—
Worcester,	134,341	43	18	13	1	6	—	1	—
Fall River,	106,305	39	23	23	7	3	—	—	1
Cambridge,	100,922	23	12	11	3	1	2	—	—
Lowell,	96,380	50	23	15	3	2	1	2	—
Lynn,	82,661	13	3	2	—	1	1	—	—
New Bedford,	82,580	33	12	1	—	—	—	1	—
Springfield,	81,425	18	3	4	1	1	—	1	—
Lawrence,	78,000	27	16	10	2	2	—	—	—
Somerville,	74,295	17	8	4	—	—	—	—	—
Brockton,	53,131	8	4	2	1	—	—	1	—
Holyoke,	52,652	7	3	—	—	—	—	—	—
Malden,	40,929	9	2	4	1	2	—	—	—
Chelsea,	39,363	12	2	2	—	1	1	—	—
Newton,	38,919	11	1	1	—	—	1	—	—
Salem,	38,666	13	4	2	1	1	—	—	—
Haverhill,	38,228	8	—	—	—	—	—	—	—
Fitchburg,	33,948	9	4	2	—	1	—	1	—
Everett,	32,415	9	2	—	—	—	—	—	—
Taunton,	30,967	10	4	6	1	1	—	—	—
Quincy,	30,924	8	2	3	1	1	—	—	—
Waltham,	28,120	2	—	1	—	1	—	—	—
Pittsfield,	27,163	6	2	2	—	1	—	—	—
Gloucester,	26,011	3	2	—	—	—	—	—	—
Brookline,	25,825	8	—	—	—	—	—	—	—
North Adams,	22,150	5	1	2	2	—	—	—	—
Chicopee,	20,831	6	2	2	—	1	—	—	—
Northampton,	20,789	7	1	2	1	1	—	—	—
Medford,	20,605	6	2	1	—	—	—	—	—
Beverly,	16,088	5	2	—	—	—	—	—	—
Leominster,	15,578	—	—	—	—	—	—	—	—
Hyde Park,	15,327	2	1	—	—	—	—	—	—
Melrose,	15,160	1	0	—	—	—	—	—	—
Newburyport,	14,794	—	—	—	—	—	—	—	—
Woburn,	14,492	1	0	—	—	—	—	—	—
Westfield,	14,457	4	2	—	—	—	—	—	—
Marlborough,	14,359	2	0	—	—	—	—	—	—
Revere,	14,248	4	1	—	—	—	—	—	—
Attleborough,	13,600	2	1	—	—	—	—	—	—
Peabody,	14,144	—	—	—	—	—	—	—	—
Adams,	13,375	0	—	—	—	—	—	—	—
Clinton,	13,105	2	2	—	—	—	—	—	—
Gardner,	12,794	2	2	—	—	—	—	—	—
Milford,	12,565	3	3	—	—	—	—	—	—
Watertown,	12,306	4	2	1	—	—	—	—	—
Plymouth,	12,149	—	—	—	—	—	—	—	—
Weymouth,	11,744	1	0	—	—	—	—	—	—
Framingham,	11,698	3	1	2	—	1	—	1	—
Southbridge,	11,630	2	1	1	—	1	—	—	—
Wakefield,	10,903	—	—	—	—	—	—	—	—
Webster,	10,825	—	—	—	—	—	—	—	—
Arlington,	10,307	1	—	—	—	—	—	—	—

Recapitulation.

Total of reporting towns, .	2,302,887	665	245	187	45	46	13	9	1
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WEEK ENDING OCT. 17, 1908.

CITIES AND TOWNS.	Population. Esti- mated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	617,082	200	78	75	18	18	7	2	2
Worcester,	134,341	33	11	7		4	1	-	-
Fall River,	106,305	46	22	23	5	3	-	-	-
Cambridge,	100,922	25	16	13	2	-	3	-	-
Lowell,	96,380	29	15	6	3	1	-	-	-
Lynn,	82,661	20	4	3	-	2	1	-	-
New Bedford,	82,580	23	9	2	-	2	-	-	-
Springfield,	81,425	19	7	6	1	1	-	1	-
Lawrence,	78,000	26	16	18	2	2	1	2	-
Somerville,	74,295	16	5	10	3	3	-	1	-
Brockton,	53,131	14	7	7	2	1	-	1	-
Holyoke,	52,652	10	5	5	2	-	-	-	-
Malden,	40,929	5	2	2	-	-	1	-	-
Chelsea,	39,363	9	4	2	-	1	1	-	-
Newton,	38,919	4	3	1	-	-	-	-	-
Salem,	38,666	13	4	3	3	-	-	-	-
Haverhill,	38,228	9	2	4	2	2	-	-	-
Fitchburg,	33,948	11	1	3	-	2	-	1	-
Everett,	32,415	3	1	-	-	-	-	-	-
Taunton,	30,967	13	2	5	1	2	-	1	-
Quincy,	30,924	6	3	1	-	1	-	-	-
Waltham,	28,120	7	2	4	-	3	-	-	-
Pittsfield,	27,168	6	-	-	-	-	-	-	-
Gloucester,	26,011	7	2	2	-	2	-	-	-
Brookline,	25,825	4	-	-	-	-	-	-	-
North Adams,	22,150	5	1	-	-	-	-	-	-
Chicopee,	20,831	1	-	-	-	-	-	-	-
Northampton,	20,789	6	2	2	1	1	-	-	-
Medford,	20,605	0	-	-	-	-	-	-	-
Beverly,	16,088	4	-	-	-	-	-	-	-
Leominster,	15,578	4	1	-	-	-	-	-	-
Hyde Park,	15,327	5	3	1	-	-	1	-	-
Melrose,	15,160	1	0	1	1	-	-	-	-
Newburyport,	14,794	-	-	-	-	-	-	-	-
Woburn,	14,492	3	0	-	-	-	-	-	-
Westfield,	14,457	7	-	-	-	-	-	-	-
Marlborough,	14,359	3	0	2	-	2	-	-	-
Revere,	14,248	3	1	2	2	-	-	-	-
Attleborough,	13,600	5	2	2	-	-	-	-	-
Peabody,	14,144	-	-	-	-	-	-	-	-
Adams,	13,375	2	1	-	-	-	-	-	-
Clinton,	13,105	3	2	-	-	-	-	-	-
Gardner,	12,794	4	-	-	-	-	-	-	-
Milford,	12,565	0	-	-	-	-	-	-	-
Watertown,	12,306	3	1	2	-	-	-	-	-
Plymouth,	12,149	-	-	-	-	-	-	-	-
Weymouth,	11,744	2	1	-	-	-	-	-	-
Framingham,	11,698	3	1	1	-	1	-	-	-
Southbridge,	11,630	2	-	2	-	2	-	-	-
Wakefield,	10,903	-	-	-	-	-	-	-	-
Webster,	10,825	-	-	-	-	-	-	-	-
Arlington,	10,307	3	1	-	-	-	-	-	-

Recapitulation.

Total of reporting towns,	2,318,465	627	238	217	48	56	16	9	2
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WEEK ENDING OCT. 24, 1908.

CITIES AND TOWNS.	Population. Est- imated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	617,082	187	64	53	20	12	4	—	4
Worcester,	134,341	33	6	6	1	3	1	—	—
Fall River,	106,305	36	17	13	4	2	—	—	—
Cambridge,	100,922	23	12	8	2	2	2	—	—
Lowell,	96,380	29	8	6	3	1	—	—	—
Lynn,	82,661	20	5	1	—	1	—	—	—
New Bedford,	82,580	24	10	9	3	2	—	—	—
Springfield,	81,425	14	5	1	—	—	—	1	—
Lawrence,	78,000	18	4	9	3	2	3	1	—
Somerville,	74,295	16	9	7	1	1	—	—	—
Brockton,	53,131	10	1	3	—	2	—	1	—
Holyoke,	52,652	20	7	1	1	—	—	—	—
Malden,	40,929	16	4	4	—	3	1	—	—
Chelsea,	39,363	5	2	1	—	—	—	1	—
Newton,	38,919	4	—	2	—	2	—	—	—
Salem,	38,666	8	2	—	—	—	—	—	—
Haverhill,	38,228	15	1	3	2	1	—	—	—
Fitchburg,	33,948	12	4	4	2	1	1	—	—
Everett,	32,415	6	4	1	—	—	1	—	—
Taunton,	30,967	6	1	1	—	—	—	—	—
Quincy,	30,924	8	3	3	—	1	—	1	—
Waltham,	28,120	7	1	1	1	—	—	—	—
Pittsfield,	27,168	7	2	2	1	1	—	—	—
Gloucester,	26,011	8	5	1	—	1	—	—	—
Brookline,	25,825	6	1	1	1	—	—	—	—
North Adams,	22,150	3	2	1	—	—	—	1	—
Chicopee,	20,831	3	1	—	—	—	—	—	—
Northampton,	20,789	8	0	—	—	—	—	—	—
Medford,	20,605	3	—	—	—	—	—	—	—
Beverly,	16,088	1	1	—	—	—	—	—	—
Leominster,	15,578	10	2	1	1	—	—	—	—
Hyde Park,	15,327	4	0	—	—	—	—	—	—
Melrose,	15,160	6	0	1	—	1	—	—	—
Newburyport,	14,794	—	—	—	—	—	—	—	—
Woburn,	14,492	3	—	—	—	—	—	—	—
Westfield,	14,457	6	1	1	—	1	—	—	—
Marlborough,	14,359	1	1	—	—	—	—	—	—
Revere,	14,248	1	—	1	1	—	—	—	—
Attleborough,	13,600	4	0	—	—	—	—	—	—
Peabody,	14,144	—	—	—	—	—	—	—	—
Adams,	13,375	2	1	—	—	—	—	—	—
Clinton,	13,105	5	0	—	—	—	—	—	—
Gardner,	12,794	5	5	2	1	—	—	—	—
Milford,	12,565	2	1	2	—	1	—	—	—
Watertown,	12,306	0	—	—	—	—	—	—	—
Plymouth,	12,149	—	—	—	—	—	—	—	—
Weymouth,	11,744	3	1	—	—	—	—	—	—
Framingham,	11,698	2	—	—	—	—	—	—	—
Southbridge,	11,630	3	2	—	—	—	—	—	—
Wakefield,	10,903	—	—	—	—	—	—	—	—
Webster,	10,825	—	—	—	—	—	—	—	—
Arlington,	10,307	0	—	—	—	—	—	—	—

Recapitulation.

Total of reporting towns,	2,318,465	613	196	150	48	41	13	6	4
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WEEK ENDING OCT. 31, 1908.

CITIES AND TOWNS.	Population Estimated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —						
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.	
Boston,	617,082	232	68	77	26	20	6	3	—	
Worcester,	134,341	37	5	11	7	2	—	—	—	
Fall River,	106,305	35	18	24	8	2	—	—	—	
Cambridge,	100,922	27	10	9	2	2	—	—	—	
Lowell,	96,380	30	5	14	5	6	—	3	—	
Lynn,	82,661	35	9	7	—	3	1	2	—	
New Bedford,	82,580	20	7	7	2	3	—	1	—	
Springfield,	81,425	23	6	5	3	—	1	—	—	
Lawrence,	78,000	22	12	6	3	1	1	—	—	
Somerville,	74,295	22	5	7	3	1	—	—	—	
Brockton,	53,131	7	2	2	1	—	—	—	—	
Holyoke,	52,652	17	3	6	—	5	—	1	—	
Malden,	40,929	9	2	4	2	1	1	—	—	
Chelsea,	39,363	3	0	—	—	—	—	—	—	
Newton,	38,919	12	5	2	2	—	—	—	—	
Salem,	38,666	11	5	2	—	2	—	—	—	
Haverhill,	38,228	11	4	2	—	—	—	1	—	
Fitchburg,	33,948	10	6	3	1	2	—	—	—	
Everett,	32,415	7	1	1	—	—	1	—	—	
Taunton,	30,967	10	4	2	—	1	—	—	—	
Quincy,	30,924	2	—	1	1	—	—	—	—	
Waltham,	28,120	4	0	—	—	—	—	—	—	
Pittsfield,	27,168	3	—	—	—	—	—	—	—	
Gloucester,	26,011	4	1	—	—	—	—	—	—	
Brookline,	25,825	8	3	1	—	—	—	—	—	
North Adams,	22,150	6	5	1	—	1	—	—	—	
Chicopee,	20,831	13	5	1	—	—	1	—	—	
Northampton,	20,789	2	0	—	—	—	—	—	—	
Medford,	20,605	6	1	2	2	—	—	—	—	
Beverly,	16,088	7	—	—	—	—	—	—	—	
Leominster,	15,578	2	—	1	—	1	—	—	—	
Hyde Park,	15,327	7	3	5	1	—	2	2	—	
Melrose,	15,160	4	2	3	—	1	1	1	—	
Newburyport,	14,794	—	—	—	—	—	—	—	—	
Woburn,	14,492	4	0	—	—	—	—	—	—	
Westfield,	14,457	2	—	—	—	—	—	—	—	
Marlborough,	14,359	2	0	—	—	—	—	—	—	
Revere,	14,248	2	1	—	—	—	—	—	—	
Attleborough,	13,600	2	1	—	—	—	—	—	—	
Peabody,	14,144	—	—	—	—	—	—	—	—	
Adams,	13,375	3	1	—	—	—	—	—	—	
Clinton,	13,105	3	1	1	—	1	—	—	—	
Gardner,	12,794	3	—	—	—	—	—	—	—	
Milford,	12,565	3	0	2	1	1	—	—	—	
Watertown,	12,306	2	1	—	—	—	—	—	—	
Plymouth,	12,149	—	—	—	—	—	—	—	—	
Weymouth,	11,744	4	0	1	1	—	—	—	—	
Framingham,	11,698	5	—	—	—	—	—	—	—	
Southbridge,	11,630	5	—	—	—	—	—	—	—	
Wakefield,	10,903	—	—	—	—	—	—	—	—	
Webster,	10,825	—	—	—	—	—	—	—	—	
Arlington,	10,307	3	0	—	—	—	—	—	—	

Recapitulation.

Total of reporting towns, .	2,318,465	691	202	211	71	57	15	14	-
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WEEKLY RETURNS OF DEATHS FROM CERTAIN INFECTIOUS DISEASES.

DEATHS FROM INFECTIOUS DISEASES NOT SPECIFICALLY MENTIONED IN ABOVE TABLES DURING THE WEEKS OF OCTOBER 3, 10, 17, 24 AND 31, 1908.

DISEASE.	Place.	WEEK ENDING —				
		Oct. 3.	Oct. 10.	Oct. 17.	Oct. 24.	Oct. 31.
Cerebro-spinal meningitis, .	Boston, . .	—	—	1	1	1
	Cambridge, .	—	—	1	1	—
	Worcester, .	1	1	2	—	1
Scarlet fever,	Boston, . .	1	1	—	—	1
	Somerville, .	—	—	—	1	—
	Waltham, . .	—	—	1	—	—
Whooping cough,	Boston, . .	1	3	1	1	2
	Fall River, .	—	—	1	—	—
	Lowell, . .	—	—	—	1	—
	Lynn, . . .	1	—	—	—	—
	Somerville, .	—	—	—	—	1
	Springfield, .	—	1	—	—	—
Influenza,	Watertown, .	—	—	1	—	—
Smallpox,	Lawrence, . .	1	—	—	—	—
Meningitis, other than cerebro-spinal.	Gardner, . .	—	—	—	1	—
	Pittsfield, .	—	1	—	—	—
	Lynn, . . .	—	—	—	—	1
	Watertown, .	—	1	—	—	—
Tetanus,	Attleborough, .	1	—	—	—	—
Anthrax,	Boston, . . .	—	—	1	—	—
Glanders,	Boston, . . .	—	—	1	—	—

WEEKLY RETURNS OF CASES OF INFECTIOUS DISEASES.

CASES OF INFECTIOUS DISEASES REPORTED DURING THE WEEKS OF OCTOBER 3, 10, 17, 24 AND 31, 1908.

[Under the provisions of section 52 of chapter 75 of the Revised Laws.]

	WEEK ENDING —				
	Oct. 3.	Oct. 10.	Oct. 17.	Oct. 24.	Oct. 31.
Diphtheria,	240	263	244	279	291
Measles,	33	30	52	110	96
Scarlet fever,	104	132	129	168	159
Typhoid fever,	111	121	96	82	85
Tuberculosis, pulmonary,	120	121	106	114	132
Cerebro-spinal meningitis,	2	2	1	2	3
Whooping cough,	16	14	12	12	21
Varicella,	19	8	9	12	16
Ophthalmia neonatorum,	—	1	—	—	—
Tracoma,	—	—	1	—	—
Erysipelas,	2	—	—	1	—
Tetanus,	—	1	—	1	—
Rabies,	—	3	—	—	—
Malignant pustule,	—	1	—	—	—
Mumps,	—	—	2	—	—

MONTHLY REPORT ON INSPECTION OF FOOD AND DRUGS.

The following summary presents the results of the examination of food and drugs made by the State Board of Health during the month of October, 1908:—

ARTICLES EXAMINED.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.	ARTICLES EXAMINED.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.
Butter,	7	—	7	Meat products —			
Canned vegetables,	5	—	5	<i>Con.</i>			
Cheese,	3	1	4	Lambs' tongues,	1	—	1
Cocoa,	5	—	5	Mince meat,	1	1	2
Coffee extract,	—	1	1	Sausages,	12	—	12
Confectionery,	7	—	7	Milk,	351	91	442
Condensed milk,	2	—	2	Pickles,	1	—	1
Cream,	14	22	36	Proprietary foods,	2	1	3
Drugs,	67	11	78	Raisins,	1	2	3
Flavoring extracts,	5	1	6	Salad dressing,	1	—	1
Honey,	1	—	1	Shrimps,	1	—	1
Jams and jellies,	6	—	6	Spices,	2	—	2
Malt extract,	1	—	1	Syrups,	1	—	1
Meat products:—				Table sauce,	3	1	4
Canned meats,	2	1	3				
Hamburg steak,	6	2	8	Total,	508	135	643

The samples of drugs found to be adulterated were syrup, spirits of camphor, tincture of iodine and spirits of peppermint.

The cities and towns in which samples were collected were: Attleborough, Auburn, Ayer, Beverly, Boston, Bridgewater, Brockton, Brookline, Cambridge, Chicopee, Dedham, Everett, Fall River, Fitchburg, Framingham, Franklin, Holliston, Holyoke, Lawrence, Lynn, Malden, Marblehead, Melrose, Methuen, Millis, Milford, Newburyport, North Andover, North Reading, Norwood, Orange, Plymouth, Reading, Rehoboth, Salem, Somerville, Southbridge, Spencer, Springfield, Turners Falls, Waltham, Webster, Wilmington, Woburn and Worcester.

PROSECUTIONS FOR VIOLATIONS OF THE LAW RELATING TO FOOD AND DRUGS.

Thirty-seven convictions were secured during the month of October, 1908, for selling adulterated food, as follows:—

No.	Name of Defendant.	Place.	Character of Article sold.
1	Edgar W. Butterworth,	Salem,	Hamburg steak. ^{1,6}
2	Henry Curtis,	Boston,	Hamburg steak. ^{1,6}
3	Warren A. Bailey,	Lawrence,	Milk (total solids, 11.17). ²
4	John H. Baldwin,	Chicopee,	Milk (total solids, 11.78).
5	Josiah W. Beckford,	Plymouth,	Milk (total solids, 10.00).
6	Michael Beauregard,	West Springfield,	Milk (total solids, 11.68).
7	Seth N. Bennett,	Agawam,	Milk (total solids, 11.48). ²
8	Frank N. Besson,	Swampscott,	Milk (total solids, 11.74). ³
9	Fred. H. Blanchard,	Plympton,	Milk (total solids, 11.04).
10	James Brady,	Agawam,	Milk (total solids, 10.88). ²
11	William R. Brown,	Fitchburg,	Milk (total solids, 11.40). ^{2,6}
12	Nellie Burns,	Saugus,	Milk (total solids, 11.74). ^{4,6}
13	Nellie Burns,	Saugus,	Milk (total solids, 11.08). ⁵
14	Nellie Burns,	Saugus,	Milk (total solids, 11.08). ⁵
15	Terrance H. Cassidy,	Millis,	Milk (total solids, 11.60). ²
16	Hyacinth Le Duc,	Westford,	Milk (total solids, 11.50).
17	Thaddeus Fowler,	Agawam,	Milk (total solids, 9.62). ^{2,6}
18	Thaddeus Fowler,	Agawam,	Milk (total solids, 10.58). ⁵
19	Samuel Gerrish,	Lynn,	Milk (total solids, 10.85). ⁵
20	Nicholas Hanrahan,	Agawam,	Milk (total solids, 11.38). ²
21	Thomas E. Kenney,	Longmeadow,	Milk (total solids, 11.40). ⁵
22	Thomas E. Kenney,	Longmeadow,	Milk (total solids, 11.63).
23	Michael J. Kennedy,	Ludlow,	Milk (total solids, 11.49). ²
24	Walter C. Knowlton,	Shrewsbury,	Milk (total solids, 11.24). ²
25	Matilda Lanouette,	Methuen,	Milk (total solids, 11.24).
26	Howard R. Lefavour,	Beverly,	Milk (total solids, 11.80). ³
27	John F. Marshall,	Beverly,	Milk (total solids, 11.51).
28	Joseph M. Maidrand,	Melrose,	Milk (total solids, 11.28). ⁵
29	William H. McCarthy,	Lynn,	Milk (total solids, 2.87). ^{5,6}
30	William H. McCarthy,	Lynn,	Milk (total solids, 11.87).
31	Fred. L. McCoy,	Westford,	Milk (total solids, 10.96).
32	Frank Mazaer,	West Springfield,	Milk (total solids, 10.98).
33	Mabel F. Noyes,	Methuen,	Milk (total solids, 11.18). ^{2,6}
34	Henry Otto,	Agawam,	Milk (total solids, 11.37). ²
35	Hans I. Schmidt,	Lynn,	Milk (total solids, 10.43). ⁵
36	Albert Stebbins,	Springfield,	Milk (total solids, 11.42).
37	Frank W. Webb,	Danvers,	Milk (total solids, 11.24). ⁵

¹ Contained sulphurous acid.

² Producer.

³ Contained a preservative.

⁴ Colored.

⁵ Watered.

⁶ Appealed.

Fines imposed, \$1,325.

LIST OF ADULTERATED OR IMPROPERLY LABELLED FOODS, ETC., FOR OCTOBER, 1908.

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
5063 P	Checkerberry extract, .	Gowing Extract Company, North Reading, . . .	Wintergreen oil, 0.8 per cent.; should contain 5 per cent. oil.
8238	Potted ham, . . .	Columbia Conserve Company, Indianapolis, Ind., .	Preserved with a compound of boron.
8386	Ketchup, . . .	Van Camp Packing Company, Indianapolis, Ind., .	Preserved with benzoic acid.
q 1178	Milk, . . .	Ernest Harnish, Methuen, . . .	Total solids, 10.40 per cent.; contained added water.
7099 P	Milk, . . .	Wm. D. Emerson, Reading, . . .	Total solids, 10.23 per cent.; contained added water.
7041 P	Milk, . . .	Nellie Burns, Saugus, . . .	Total solids, 11.80 per cent.; colored with annatto.
7043 P	Milk, . . .		Total solids, 12.60 per cent.; colored with annatto.
5029 P	Milk, . . .		Total solids, 11.08 per cent.; contained added water, colored with annatto.
5031 P	Milk, . . .		Total solids, 11.74 per cent.; colored with annatto.
5051 P	Milk, . . .	Joseph Mairand, Melrose, . . .	Total solids, 11.28 per cent.; contained added water.
5053 P	Milk, . . .	William H. McCarthy, Lynn, . . .	Total solids, 2.87 per cent.; contained added water.
5001 P	Milk, . . .	Hans J. Schmidt, Lynn, . . .	Total solids, 10.43 per cent.; contained added water.
5003 P	Milk, . . .	Frank N. Besson, Swampscott, . . .	Total solids, 11.74 per cent.; preserved with formaldehyde.
7091 P	Cream, . . .	H. P. Hood & Sons, Boston, . . .	Contained calcium sucrate.
8059 P	Cream, . . .		Contained calcium sucrate.
7015 P	Cream, . . .	Deerfoot Farm, Southborough, . . .	Contained calcium sucrate.
7095 P	Cream, . . .		Contained calcium sucrate.
7089 P	Cream, . . .	Dalobe Farm, Reading, . . .	Contained calcium sucrate.
8097 P	Cream, . . .	D. Whiting & Sons, Boston, . . .	Contained calcium sucrate.
8007 P	Cream, . . .	Speedwell Farm, . . .	Contained calcium sucrate.

INSPECTION OF DAIRIES.

During the month of October, 1908, 169 dairies were examined in the following places:—

PLACE.	Number examined.	Number found to present no Objectionable Features.	Per Cent.	Number to which Letters were sent.	Per Cent.
Adams,	—	—	—	—	—
Second inspection,	2	1	50.00	1	50.00
Chelsea,	11	6	54.55	5	45.45
Second inspection,	13	3	23.08	10	76.92
Everett,	9	6	66.67	3	33.33
Second inspection,	12	6	50.00	6	50.00
Third inspection,	2	1	50.00	1	50.00
Fitchburg,	—	—	—	—	—
Second inspection,	2	—	—	2	100.00
Lynn,	6	4	66.67	2	33.33
Second inspection,	17	13	76.47	4	23.53
Nahant,	—	—	—	—	—
Second inspection,	2	2	100.00	—	—
North Adams,	—	—	—	—	—
Second inspection,	23	16	69.57	7	30.43
Revere,	1	1	100.00	—	—
Second inspection,	5	1	20.00	4	80.00
Salem,	10	6	60.00	4	40.00
Second inspection,	6	3	50.00	3	50.00
Saugus,	7	4	57.14	3	42.86
Second inspection,	26	10	38.46	16	61.54
Fourth inspection,	1	—	—	1	100.00
Swampscott,	—	—	—	—	—
Second inspection,	7	3	42.86	4	57.14
Wareham,	—	—	—	—	—
Second inspection,	7	6	85.71	1	14.29

Total number of dairies examined,	169
Number found to be free from objectionable conditions,	92
Number to which letters were sent,	77
Total number of conditions to which attention was called,	245
Percentage of dairies which passed inspection,	54.44

The names of the owners of dairies found to be worthy of commendation follow:—

Adams.

Johnson, James A.¹

Chelsea.

Carter, James E.¹

Mills, E. E.¹

Siggins, Clifford

Gross, Abram ¹

Paisner, H.

Sloan, Harry

Hancock, T. G.

Rudman, Mrs. A.

Smith, Charles

¹ Second inspection.

Everett.

Ayers, Harry W.
Brown, Dr. R. E.
Cannell, J. H.^{1,2}
Carr, J. A.¹
Coleman Bros.^{1,2}

Corkery, James
Fielding, Thomas
Leavitt, F. H.^{1,2}
Maxwell, Thomas

Page, W. R.^{1,2}
Peterson, John A.³
Smith, Owen ^{1,2}
Stone, Mayer

Lynn.

Bates, Edward ^{1,2}
Bessom, J. Fred ^{1,2}
Currier, Albert ^{1,2}
Dearborn, S. W.^{1,2}
Foss, Albert C.¹
Graham, John H.

Heath, Henry ^{1,2}
Hill, Franklin P.¹
Kiley, James H.^{1,2}
McElroy, Thomas ^{1,2}
Nicholson, George F.¹
Phillips, A. O.¹

Polonius, Martin
Prime, Frank E.
Prime, John H.^{1,2}
Waitt, L. Alden ^{1,2}
Wheeler, Harry G.

Nahant.

Killilea, Roger ^{1,2}

St. George, George ^{1,2}

North Adams.

Bennett, W. W.¹
Bissallon, J.^{1,2}
Briggs, Richard ^{1,2}
Clairmont, Moses ^{1,2}
Clairmont, N.¹
Comstock, Henry ^{1,2}

Crews, Henry ^{1,2}
Crews, William ¹
Daniels, H. E.^{1,2}
Hosley, Elmer D.¹
Hosley, S. S.^{1,2}

Landry, Wilfred ¹
Lillie Bros.¹
North Adams City Farm ¹
Oldman, Peter ^{1,2}
Scully, Thomas H.^{1,2}

Revere.

Brown, A. J.

Ziner, Isaac

Salem.

Crodis, E. E.^{1,2}
Fay, James J.
Hinckley, C. E.¹

Proctor, C. H.
Reid, Abel
Sands, E. L.¹

Turner, George
Wood, S. D.
Wyman, Isaac C.

Saugus.

Bennett, Frank P.^{1,2}
Cummings, P. L.
Edmands Bros.¹
Edmands, E. H.
Hawkes, Richard ¹

Johnson, H. W.¹
Longfellow, I.¹
McGuire, T.
McTeague, Terrance ¹
Penney, Willie ^{1,2}

Saugus Town Home ¹
Stevens, E.
Stocker, W. M.¹
Wormstead, C. N.¹

Swampscott.

Curtis, C. P.^{1,2}

Lodge, M. E.¹

Phillips, L.H.¹

Wareham.

Briggs, I. N.¹
Bumpus, Edward ^{1,2}

Gault, Thomas W.¹
Hegarty, C.^{1,2}

Mackie, John ^{1,2}
Robbins, F. L.^{1,2}

¹ Second inspection.

² Reported favorably on first inspection as well.

³ Third inspection.

DEATH-RATES FROM TUBERCULOSIS, BY TEN-YEAR PERIODS, IN THE THIRTY-THREE CITIES OF MASSACHUSETTS, FROM 1878 TO 1907.

[The town of Brookline is included in this list.]

CITIES.	Death-rate per 10,000 Living, 1878-1887.	Death-rate per 10,000 Living, 1888-1897.	Death-rate per 10,000 Living, 1898-1907.
Boston,	39.2	32.9	21.6
Worcester,	26.8	23.0	17.5
Fall River,	33.0	23.4	18.6
Cambridge,	31.1	26.6	19.9
Lowell,	35.0	25.0	17.0
Lynn,	32.9	22.5	14.9
New Bedford,	30.6	22.6	18.3
Springfield,	28.3	20.3	12.9
Lawrence,	38.6	21.9	17.3
Somerville,	27.4	21.0	14.1
Brockton,	30.3	20.4	14.4
Holyoke,	30.0	24.2	17.2
Malden,	27.9	21.1	14.0
Chelsea,	28.0	28.1	18.6
Newton,	21.0	16.0	9.2
Salem,	34.8	19.7	15.8
Haverhill,	31.3	23.3	17.8
Fitchburg,	26.4	19.3	11.9
Everett,	23.8	21.2	15.2
Taunton,	28.7	23.3	20.2
Quincy,	26.7	24.1	15.5
Waltham,	29.2	24.0	15.1
Pittsfield,	22.8	17.5	13.4
Gloucester,	25.4	18.0	14.1
Brookline,	18.3	15.2	8.2
North Adams,	26.1	18.6	13.9
Chicopee,	32.4	25.8	17.4
Northampton,	29.2	21.6	14.8
Medford,	22.7	16.0	11.2
Beverly,	27.1	18.6	13.7
Melrose,	21.3	17.8	13.2
Newburyport,	34.9	24.6	16.5
Woburn,	31.1	22.0	18.7
Marlborough,	33.0	24.3	15.4

THE TUBERCULOSIS EXHIBITION AT WASHINGTON.

The Massachusetts State Committee for the International Congress on Tuberculosis, held in Washington, D. C., from Sept. 21 to Oct. 12, 1908, collected an exhibit, with the approval of the State Board of Health, in accordance with an act of the Legislature of 1908, which was sent to Washington and arranged with the exhibits from other States at the new National Museum. The Massachusetts exhibit represented practically every phase of the tuberculosis campaign throughout the Commonwealth. The State of Massachusetts was awarded a silver medal,

and the Massachusetts State Committee of the International Congress a gold medal for the bound volume on "Tuberculosis in Massachusetts." This volume contains a valuable contribution to the literature on tuberculosis, bringing together related facts and history heretofore inaccessible. The four principal parts of the State exhibit were prepared by (1) the State Board of Health, (2) the State Sanatorium at Rutland, (3) the Boston Consumptives' Hospital, and (4) the Boston Association for the Relief and Control of Tuberculosis.

The series of photographs sent by the State Board of Health was unique. It was the choicest collection of photographs bearing upon the subject of occupational hygiene that has been shown in this country. While the collection contained certain industries which are commonly regarded as being conducive to tuberculosis of the lungs, it included many large views of the main processes of manufacture in these and in other industries conducted in establishments where the conditions as to light, ventilation, dust, gases, humidity, etc., were practically ideal. The photographs were constantly surrounded by workmen of all kinds, and received a great deal of attention. They were awarded a silver medal.

The State Sanatorium at Rutland, the first State sanatorium in this country, prepared a large model of the entire institution, with smaller models of the various wards and shacks. In addition, there were plans and photographs. The model constructed by an ex-Rutland patient, said to be the most attractive and effective one of its kind in Washington, was assigned a silver medal.

The Boston Consumptives' Hospital displayed maps, charts, plans, photographs and several large models. Legends were posted, describing the work carried on in Boston, the work and buildings in Mattapan, the day camp and the out-patient nursing department. Both the hospital and the dispensary were awarded silver medals.

The most attractive feature of the section prepared by the Boston Association for the Relief and Control of Tuberculosis was a series of models, diagrams and charts which showed how the subject of home hygiene was taught at the Louisa M. Alcott and Hawthorne children's clubs in Boston. In these clubs, by means of dolls, small beds, models of houses, etc., children are taught in a practical way the simple rules of health as to bathing, dressing, ventilating their rooms and other matters of hygiene. Various compositions written and illustrated by the children were shown. This work attracted a great deal of attention, both among the laity and physicians. The Society for the Relief and Control of Tuberculosis was awarded a gold medal. Honorable mention was made for the work done by the classes instructing delicate children

on personal hygiene, and for their out-of-door school for children ill with tuberculosis. A silver medal was awarded the Louisa M. Alcott and the Hawthorne clubs for the illustration of their work and methods in the training of children in laws of hygiene.

The Associated Committees of the Massachusetts Medical Society, organized for the study and prevention of tuberculosis in Massachusetts, showed by an elaborate series of maps what has been accomplished throughout the State in the way of establishing tuberculosis classes, day camps, dispensaries and anti-tuberculosis associations.

The Massachusetts Commission on Hospitals for Consumptives showed plans of the proposed hospitals for patients ill with tuberculosis.

The Boston District Nursing Association showed the methods of district nurses' co-operation, including the assistance of the nurses at the dispensary for examination of patients and their assistance at the patients' tenement homes.

The plans of the tuberculosis wards of the State Hospital at Tewksbury met with approval as being excellent types of moderate-priced construction for hospitals for advanced cases of tuberculosis, and were awarded a gold medal.

The pathological collection of the Boston University Medical School, which consisted of beautifully mounted specimens, showing practically every form in which tuberculosis is met with in human beings and in animals, was regarded as the best exhibit of its kind, and was awarded a silver medal.

The models presented by the Millet and Sharon sanatoria were commendable, as showing the methods of construction adopted, and the manner of caring for patients, at these private institutions.

The plans and photographs of the Channing Home, the oldest institution for tuberculosis in Massachusetts, gave a very clear idea of the exterior and interior of the building, where excellent work is done in the care of tuberculosis patients.

The House of the Good Samaritan, one of the most elaborate and best-equipped institutions of its kind in the country, displayed some beautiful photographs of the institution, including plans and models of the day camp.

A gold medal was awarded the Emmanuel Church Tuberculosis Class for their display models, charts and photographs, which showed that much good could be done by tuberculosis classes.

Other contributors were as follows: the Brookline Day Camp; the Cambridge Anti-Tuberculosis Association; the Cambridge Board of Health; Cullis Consumptives' Home, Dorchester; Danvers Insane Asylum; Fitchburg Society for the Control and Cure of Tuberculosis; Free

Home for Consumptives, Dorchester; Haverhill Anti-Tuberculosis Association; Holyoke Association for the Prevention and Relief of Tuberculosis; Lawrence Anti-Tuberculosis League; Long Island Hospital and Almshouse, Long Island, Boston; Massachusetts State Federation of Women's Clubs; Portuguese League for Assistance of Consumptives, New Bedford; Springfield Association for the Prevention of Tuberculosis; Tuberculosis Committee of the Associated Charities, Malden; Tuberculosis Committee of the Associated Charities, Salem; Worcester City Hospital Dispensary.

THE COLD STORAGE OF POULTRY.

In cold-storage warehouses poultry is kept continuously at a temperature considerably below 0° F., even as low as 10° below. At such a temperature no chemical or bacteriological changes occur, and the birds remain sweet and wholesome indefinitely. Some authorities claim that prolonged exposure to temperatures below 0° F. not only inhibits the growth of bacteria, but actually destroys 90 per cent. of them. At all events, the meat of such fowls, if properly handled after removal from cold storage, will be found unimpaired in flavor and indistinguishable from that of freshly killed birds.

Because of numerous cases of so-called ptomaine poisoning, which have been attributed of late years to cold-storage poultry, the question as to whether poultry should be kept in cold storage in a drawn or undrawn condition was recently made the subject of a chemical and bacteriological investigation in Massachusetts, under the direction of the State Board of Health.¹

The undrawn condition of fowls was thought by some persons to stimulate decomposition during cold storage, and laws have been passed in certain States requiring poultry to be drawn before it is placed in cold storage.

Investigation disclosed the fact that because the public would not buy frozen birds, the custom arose among marketmen of thawing fowls which had been kept in cold storage by soaking them in water over night before placing them on sale. Fowls thawed in this manner appeared much like freshly killed birds, and found a ready sale. Such a procedure, it was discovered, included the use of the same water for successive lots of fowls which were water-logged and readily open to bacterial decomposition, in addition to being insipid to the taste and

¹ Report upon the Chemical Examination of Drawn and Undrawn Poultry kept in Cold Storage, by William F. Boos, Ph.D., M.D.

having a disagreeable flavor. When the sales of such fowls were slow, many of the birds were badly tainted before they reached the consumer, and it was these dirty, water-logged and tainted birds which the consumer knew as "cold-storage" poultry. It was found, further, that at times many of the fowls which were thawed remained unsold after days of exposure, when their condition was such that no one would buy them; and in order to prevent a serious loss, the dealer was tempted to replace such birds in cold storage. The process of refreezing tended to remove the odor of decomposition from the birds, so that the dealer might thaw them again and offer them for sale at a time when they might contain dangerous products of decomposition.

It was found that the custom of drawing poultry destined for cold storage is to sever the gut, usually below the gizzard, and to withdraw the intestines through the small opening in the lower abdomen. Sometimes the crop is also removed. In this manner of drawing it is impossible to prevent the contamination of the birds with intestinal contents, so that when the fowl is removed from cold storage, decomposition sets in more quickly than in the undrawn bird. Accordingly, undrawn fowls, when removed from cold storage, were found to show better keeping qualities, the bacteria in the intestines being destroyed in a great measure by freezing, and thus delaying intestinal putrefaction. Undrawn fowls, however, must be eaten within a few days, otherwise decomposition, which has already begun, will increase rapidly.

If, on the other hand, the bird is drawn completely, and the entire alimentary tract, including the cesophagus, crop, gizzard and intestines, together with the attached glandular organs, are removed intact, it is practically safe from putrefaction, so that even in the hottest summer weather exposure to the air will cause it to dry up without decomposing. For this reason, therefore, it would seem from the results of the investigation that the most effectual measure in guarding the safety of the public would be to provide for the complete drawing of poultry to be placed in cold storage, although practically it makes no difference whether the fowls are drawn or not at the time they are placed in cold storage, provided they are stored in a perfectly fresh condition.

In order to avoid obtaining water-logged and refrozen fowls, the consumer should demand the frozen bird, and thaw it himself. If thawed quickly by immersion in a bucket of hot water, it may be eaten with impunity and with relish the same day it is purchased; or, if hung over night at room temperature, it may be ready for use the day following. Ordinary drawing is worse by far than no drawing at all.

If the public would learn to buy the frozen, properly drawn bird, and would then thaw the bird at home, the most satisfactory solution of the problem would be reached.

AN OUTBREAK OF TYPHOID FEVER IN NEWBURYPORT.

On August 10 it came to the knowledge of the State Inspector of Health of District No. 8 that typhoid fever existed in Newburyport, and a careful investigation was made on that day, which disclosed the fact that 9 persons were seized previous to August 10 and that 3 persons had been stricken in July, making a total of 12 who had come down with the disease. During the course of the outbreak all possible information concerning the prevalence of the disease was obtained. It was learned that of 38 cases which were reported to the State Board of Health between July 18 and October 31, inclusive, 27 occurred during the month of August,—9 during the week ending August 8 and 10 during the week ending August 15, making 19, or 50 per cent, of the total number occurring between August 1 and 15, inclusive. But 4 cases occurred during September and 5 during October, which were, in all probability, secondary cases, the last case being reported on October 23. It will therefore be seen that the outbreak was explosive in character, and that the greatest number of cases occurred during the first two weeks in August.

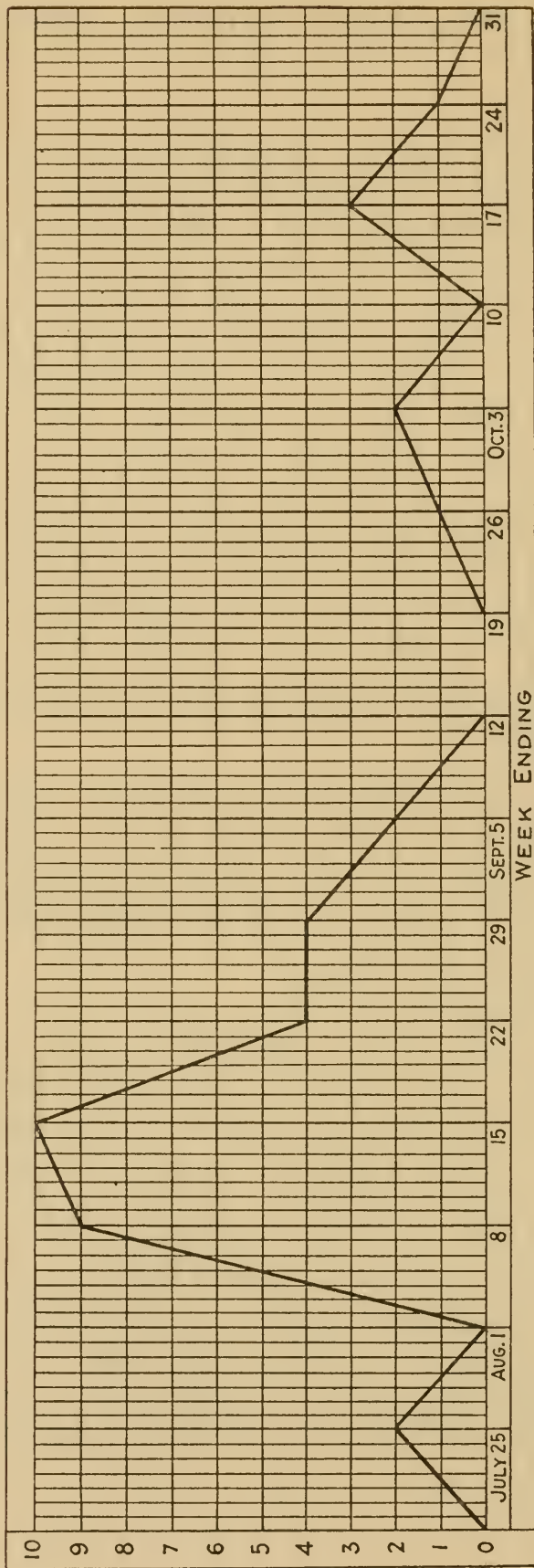
Careful study of the facts gained by investigation failed to show the public water supply to be a means for the spread of infection. While the cases of the disease were widely distributed throughout the city, a considerable number of them were localized, and neither in numbers nor in thoroughness of distribution did the outbreak coincide with an epidemic from water-borne contagion.

Likewise, an investigation of the ice supply failed to disclose any facts proving this to be a means whereby the contagion was spread.

While it is true that about 50 per cent of the persons afflicted may have received milk, directly or indirectly, from one dealer's supply, no source of infection on this dealer's premises, or among his employees, could be found. Moreover, further investigation disclosed the fact that on none of the 40, or more, farms where milk was produced for 17 dealers, who supplied milk at the homes of the persons afflicted, could be found a source of infection which might account for the outbreak.

In this outbreak, upon the evidence of the facts at hand, therefore, the cause of the infection could not be determined.

The accompanying chart gives the incidence of the disease by week endings.



WEEKLY INCIDENCE OF TYPHOID CASES IN NEWBURYPORT

MONTHLY BULLETIN

OF THE

STATE BOARD OF HEALTH

OF

MASSACHUSETTS.

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STATE BOARD OF HEALTH.

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BOSTON

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18 POST OFFICE SQUARE

1908

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WEEKLY RETURNS OF DEATHS FROM CITIES AND TOWNS OF MORE THAN 10,000 POPULATION.

WEEK ENDING NOV. 7, 1908.

CITIES AND TOWNS.	Population, ¹ Esti- mated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM—						
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.	
Boston,	617,082	170	46	65	25	19	5	2	1	
Worcester,	134,341	34	9	6	3	1	1	-	-	
Fall River,	106,305	20	11	11	5	1	-	-	-	
Cambridge,	100,922	29	11	10	5	1	-	-	-	
Lowell,	96,380	32	10	12	3	4	1	2	-	
Lynn,	82,661	15	3	1	-	-	-	-	-	
New Bedford,	82,580	24	11	8	1	3	-	-	-	
Springfield,	81,425	32	9	7	1	2	3	1	-	
Lawrence,	78,000	23	8	3	2	-	-	-	-	
Somerville,	74,295	19	9	11	4	3	1	-	-	
Brockton,	53,131	10	1	1	1	-	-	-	-	
Holyoke,	52,652	8	6	3	2	-	-	-	-	
Malden,	40,929	12	4	2	-	1	1	-	-	
Chelsea,	39,363	7	1	-	-	-	-	-	-	
Newton,	38,919	5	1	-	-	-	-	-	-	
Salem,	38,666	4	-	1	-	1	-	-	-	
Haverhill,	38,228	7	4	3	1	-	-	-	-	
Fitchburg,	33,948	11	2	3	2	1	-	-	-	
Everett,	32,415	7	2	3	-	2	1	-	-	
Taunton,	30,967	8	4	3	1	1	-	-	-	
Quincy,	30,924	7	3	1	-	1	-	-	-	
Waltham,	28,120	8	1	1	-	1	-	-	-	
Pittsfield,	27,168	3	-	2	1	-	-	1	-	
Gloucester,	26,011	4	1	-	-	-	-	-	-	
Brookline,	25,825	10	2	-	-	-	-	-	-	
North Adams,	22,150	7	2	1	-	-	-	-	-	
Chicopee,	20,831	6	4	2	1	-	-	-	-	
Northampton,	20,789	5	1	-	-	-	-	-	-	
Medford,	20,605	5	-	2	2	-	-	-	-	
Beverly,	16,088	4	-	-	-	-	-	-	-	
Leominster,	15,578	3	1	-	-	-	-	-	-	
Hyde Park,	15,327	1	0	-	-	-	-	-	-	
Melrose,	15,160	3	1	1	1	-	-	-	-	
Newburyport,	14,794	6	2	-	-	-	-	-	-	
Woburn,	14,492	6	2	-	-	-	-	-	-	
Westfield,	14,457	4	2	-	-	-	-	-	-	
Marlborough,	14,359	0	-	-	-	-	-	-	-	
Revere,	14,248	1	1	-	-	-	-	-	-	
Attleborough,	13,600	2	0	-	-	-	-	-	-	
Peabody,	14,144	-	-	-	-	-	-	-	-	
Adams,	13,375	5	-	1	-	1	-	-	-	
Clinton,	13,105	6	1	-	-	-	-	-	-	
Gardner,	12,794	2	-	-	-	-	-	-	-	
Milford,	12,565	2	-	-	-	-	-	-	-	
Watertown,	12,306	-	-	-	-	-	-	-	-	
Plymouth,	12,149	-	-	-	-	-	-	-	-	
Weymouth,	11,744	3	1	-	-	-	-	-	-	
Framingham,	11,698	7	2	2	1	-	-	-	-	
Southbridge,	11,630	0	-	-	-	-	-	-	-	
Wakefield,	10,903	-	-	-	-	-	-	-	-	
Webster,	10,825	-	-	-	-	-	-	-	-	
Arlington,	10,307	1	-	-	-	-	-	-	-	

Recapitulation.

Total of reporting towns, .	2,320,953	588	179	166	62	43	13	6	1
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¹ The populations were estimated upon the rate of growth from 1900 to 1905. Those of Taunton, Gloucester, North Adams and Clinton were allowed to stand as in 1905, having shown no increase during the five-year period. The gain in the population of Lowell is due to the annexation of a part of the town of Tewksbury. The population of Lawrence by the census of 1905 was 70,050, but, owing to the building of the new Wood and Arlington mills, employing at present some 3,000 operatives, an increase of about 8,000 is estimated by the Lawrence board of health, or 78,000.

WEEK ENDING NOV. 14, 1908.

CITIES AND TOWNS.	Population. Estimated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —						
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.	
Boston,	617,082	221	58	60	26	15	1	4	1	
Worcester,	134,341	34	8	12	3	6	—	2	—	
Fall River,	106,305	33	13	9	3	1	—	—	—	
Cambridge,	100,322	27	3	11	6	5	—	—	—	
Lowell,	96,380	35	11	9	6	1	1	—	—	
Lynn,	82,661	27	4	8	—	6	1	—	—	
New Bedford,	82,580	32	9	7	—	5	—	2	—	
Springfield,	81,425	22	5	6	3	1	1	1	—	
Lawrence,	78,000	30	9	10	3	3	1	—	—	
Somerville,	74,295	23	8	4	2	1	—	—	—	
Brockton,	53,131	6	1	1	—	1	—	—	—	
Holyoke,	52,652	22	12	7	1	1	1	1	—	
Malden,	40,929	11	5	3	—	1	2	—	—	
Chelsea,	39,363	10	4	2	—	—	1	—	—	
Newton,	38,919	9	—	—	—	—	—	—	—	
Salem,	38,666	16	2	—	—	—	—	—	—	
Haverhill,	38,228	17	—	1	—	1	—	—	—	
Fitchburg,	33,948	9	2	3	—	2	—	—	—	
Everett,	32,415	11	0	1	—	1	—	—	—	
Taunton,	30,967	10	3	4	1	—	—	—	—	
Quincy,	30,924	7	5	1	—	—	1	—	—	
Waltham,	28,120	3	0	1	—	1	—	—	—	
Pittsfield,	27,168	6	1	2	—	—	1	1	—	
Gloucester,	26,011	9	1	1	—	1	—	—	—	
Brookline,	25,825	7	1	2	2	—	—	—	—	
North Adams,	22,150	4	1	1	—	1	—	—	—	
Chicopee,	20,831	7	2	2	2	—	—	—	—	
Northampton,	20,789	5	1	—	—	—	—	—	—	
Medford,	20,605	5	—	—	—	—	—	—	—	
Beverly,	16,088	3	—	—	—	—	—	—	—	
Leominster,	15,578	7	1	4	2	1	—	1	—	
Hyde Park,	15,327	3	1	—	—	—	—	—	—	
Melrose,	15,160	0	—	—	—	—	—	—	—	
Newburyport,	14,794	6	1	1	—	—	—	1	—	
Woburn,	14,492	2	0	—	—	—	—	—	—	
Westfield,	14,457	10	2	2	1	1	—	—	—	
Marlborough,	14,359	3	1	1	1	—	—	—	—	
Revere,	14,248	1	—	—	—	—	—	—	—	
Attleborough,	13,600	2	0	—	—	—	—	—	—	
Peabody,	14,144	—	—	—	—	—	—	—	—	
Adams,	13,375	4	2	—	—	—	—	—	—	
Clinton,	13,105	2	0	1	—	1	—	—	—	
Gardner,	12,794	4	2	2	1	1	—	—	—	
Milford,	12,565	2	0	—	—	—	—	—	—	
Watertown,	12,306	0	—	—	—	—	—	—	—	
Plymouth,	12,149	—	—	—	—	—	—	—	—	
Weymouth,	11,744	2	1	1	—	—	1	—	—	
Framingham,	11,698	3	—	—	—	—	—	—	—	
Southbridge,	11,630	2	1	—	—	—	—	—	—	
Wakefield,	10,903	—	—	—	—	—	—	—	—	
Webster,	10,825	—	—	—	—	—	—	—	—	
Arlington,	10,307	3	2	1	—	—	—	1	—	

Recapitulation.

Total of reporting towns,	2,333,259	717	183	181	63	58	12	14	1
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WEEK ENDING NOV. 21, 1908.

CITIES AND TOWNS.	Population. Estimated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM—						
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.	
Boston,	617,082	177	56	63	23	17	10	1	1	
Worcester,	134,341	43	12	18	7	6	2	1	—	
Fall River,	106,305	33	16	10	2	2	—	—	—	
Cambridge,	100,922	23	9	7	4	—	1	—	1	
Lowell,	96,380	42	11	14	8	6	—	—	—	
Lynn,	82,661	19	5	3	—	1	—	1	—	
New Bedford,	82,580	33	15	11	10	1	—	—	—	
Springfield,	81,425	14	—	3	2	—	—	—	—	
Lawrence,	78,000	23	6	7	2	3	1	—	—	
Somerville,	74,295	16	2	4	—	1	—	1	—	
Brockton,	53,131	10	5	4	2	1	—	—	—	
Holyoke,	52,652	10	2	2	—	—	1	—	—	
Malden,	40,929	9	2	3	—	2	1	—	—	
Chelsea,	39,363	7	2	1	—	—	—	—	—	
Newton,	38,919	5	2	1	—	1	—	—	—	
Salem,	38,666	9	2	2	1	—	—	—	—	
Haverhill,	38,228	6	—	5	2	2	—	1	—	
Fitchburg,	33,948	7	3	1	1	—	—	—	—	
Everett,	32,415	2	0	—	—	—	—	—	—	
Taunton,	30,967	17	5	6	1	2	1	—	—	
Quincy,	30,924	5	2	1	—	1	—	—	—	
Waltham,	28,120	6	1	2	2	—	—	—	—	
Pittsfield,	27,168	7	1	3	2	—	—	1	—	
Gloucester,	26,011	5	1	—	—	—	—	—	—	
Brookline,	25,825	3	—	—	—	—	—	—	—	
North Adams,	22,150	3	—	1	—	—	—	—	—	
Chicopee,	20,831	6	3	3	—	2	1	—	—	
Northampton,	20,789	7	3	2	—	1	—	—	—	
Medford,	20,605	2	—	1	—	1	—	—	—	
Beverly,	16,088	5	—	1	1	—	—	—	—	
Leominster,	15,578	2	—	—	—	—	—	—	—	
Hyde Park,	15,327	3	2	—	—	—	—	—	—	
Melrose,	15,160	4	2	3	3	—	—	—	—	
Newburyport,	14,794	9	1	—	—	—	—	—	—	
Woburn,	14,492	6	0	1	—	—	—	1	—	
Westfield,	14,457	1	1	—	—	—	—	—	—	
Marlborough,	14,359	4	1	—	—	—	—	—	—	
Revere,	14,248	1	—	—	—	—	—	—	—	
Attleborough,	13,600	2	0	—	—	—	—	—	—	
Peabody,	14,144	—	—	—	—	—	—	—	—	
Adams,	13,375	4	—	—	—	—	—	—	—	
Clinton,	13,105	3	1	—	—	—	—	—	—	
Gardner,	12,794	2	2	1	—	—	—	—	—	
Milford,	12,565	4	1	1	—	—	—	—	—	
Watertown,	12,306	3	2	—	—	—	—	—	—	
Plymouth,	12,149	—	—	—	—	—	—	—	—	
Weymouth,	11,744	2	1	1	1	—	—	—	—	
Framingham,	11,698	1	—	—	—	—	—	—	—	
Southbridge,	11,630	5	—	2	1	—	1	—	—	
Wakefield,	10,903	—	—	—	—	—	—	—	—	
Webster,	10,825	—	—	—	—	—	—	—	—	
Arlington,	10,307	4	1	1	—	—	—	—	—	

Recapitulation.

Total of reporting towns,	2,333,259	614	181	189	75	50	19	7	2
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WEEK ENDING NOV. 28, 1908.

CITIES AND TOWNS.	Population. Estimated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal Infectious Diseases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	617,082	199	68	76	37	12	6	3	—
Worcester,	134,341	41	11	9	3	2	3	1	—
Fall River,	106,305	28	8	14	6	3	—	—	—
Cambridge,	100,922	29	—	9	7	2	—	—	—
Lowell,	96,380	22	3	7	5	1	1	—	—
Lynn,	82,661	15	3	4	—	2	2	—	—
New Bedford,	82,580	33	9	12	6	3	1	1	—
Springfield,	81,425	24	6	5	2	1	1	1	—
Lawrence,	78,000	22	8	3	2	1	—	—	—
Somerville,	74,295	11	0	7	2	4	1	—	—
Brockton,	53,131	6	3	1	—	—	—	—	—
Holyoke,	52,652	16	10	7	3	—	2	—	—
Malden,	40,929	7	3	3	—	1	1	—	—
Chelsea,	39,363	4	0	1	—	1	—	—	—
Newton,	38,919	7	1	1	1	—	—	—	—
Salem,	38,666	4	1	1	1	—	—	—	—
Haverhill,	38,228	10	—	2	—	2	—	—	—
Fitchburg,	33,948	10	4	1	—	—	1	—	—
Everett,	32,415	7	1	—	—	—	—	—	—
Taunton,	30,967	7	1	4	2	2	—	—	—
Quincy,	30,924	5	1	—	—	—	—	—	—
Waltham,	28,120	5	2	4	2	1	—	—	—
Pittsfield,	27,168	14	3	6	2	4	—	—	—
Gloucester,	26,011	4	1	—	—	—	—	—	—
Brookline,	25,825	6	1	1	1	—	—	—	—
North Adams,	22,150	8	5	3	—	—	—	1	—
Chicopee,	20,831	5	2	—	—	—	—	—	—
Northampton,	20,789	5	1	—	—	—	—	—	—
Medford,	20,605	1	—	—	—	—	—	—	—
Beverly,	16,088	10	4	3	1	—	1	—	—
Leominster,	15,578	1	—	1	1	1	—	—	—
Hyde Park,	15,327	4	1	2	—	—	1	1	—
Melrose,	15,160	5	1	3	2	1	—	—	—
Newburyport,	14,794	6	1	1	—	—	—	—	—
Woburn,	14,492	3	1	—	—	—	—	—	—
Westfield,	14,457	8	1	1	—	1	—	—	—
Marlborough,	14,359	4	1	—	—	—	—	—	—
Revere,	14,248	3	1	3	2	—	—	—	—
Attleborough,	13,600	6	4	—	—	—	—	—	—
Peabody,	14,144	—	—	—	—	—	—	—	—
Adams,	13,375	5	2	—	—	—	—	—	—
Clinton,	13,105	6	1	—	—	—	—	—	—
Gardner,	12,794	1	—	—	—	—	—	—	—
Milford,	12,565	1	1	1	—	—	—	—	—
Watertown,	12,306	1	0	—	—	—	—	—	—
Plymouth,	12,149	—	—	—	—	—	—	—	—
Weymouth,	11,744	2	1	1	—	1	—	—	—
Framingham,	11,698	1	1	1	1	—	—	—	—
Southbridge,	11,630	1	—	—	—	—	—	—	—
Wakefield,	10,903	—	—	—	—	—	—	—	—
Webster,	10,825	—	—	—	—	—	—	—	—
Arlington,	10,307	0	—	—	—	—	—	—	—

Recapitulation.

Total of reporting towns, .	2,333,259	623	177	198	89	46	21	8	—
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WEEKLY RETURNS OF DEATHS FROM CERTAIN INFECTIOUS DISEASES.

DEATHS FROM INFECTIOUS DISEASES NOT SPECIFICALLY MENTIONED IN ABOVE TABLES DURING THE WEEKS OF NOVEMBER 7, 14, 21 AND 28, 1908.

DISEASE.	Place.	WEEK ENDING—			
		Nov. 7.	Nov. 14.	Nov. 21.	Nov. 28.
Cerebro-spinal meningitis, .	Boston, . . .	1	—	1	2
	Lawrence, . . .	—	1	—	—
	Salem, . . .	—	—	1	—
Scarlet fever,	Arlington, . . .	—	—	1	—
	Boston, . . .	2	2	3	4
	Cambridge, . . .	1	—	—	—
	Fall River, . . .	—	—	1	—
	Gardner, . . .	—	—	1	—
	Somerville, . . .	—	—	1	—
	Worcester, . . .	1	—	—	—
Whooping cough,	Boston, . . .	1	2	—	3
	Chelsea, . . .	—	1	1	—
	Fall River, . . .	—	—	1	—
	Haverhill, . . .	1	—	—	—
	Lowell, . . .	1	1	—	—
	North Adams, . . .	1	—	—	—
	Revere, . . .	—	—	—	1
	Somerville, . . .	1	—	—	—
Meningitis, other than cerebro-spinal.	Lynn, . . .	1	1	1	—
	Malden, . . .	—	1	—	—
	Newburyport, . . .	—	—	—	1
	Waltham, . . .	—	—	—	1
Tetanus,	Fitchburg, . . .	—	1	—	—
Erysipelas,	Boston, . . .	—	1	—	2
	Taunton, . . .	—	1	—	—
Hydrophobia,	Newton, . . .	—	—	—	1

WEEKLY RETURNS OF CASES OF INFECTIOUS DISEASES.

CASES OF INFECTIOUS DISEASES REPORTED DURING THE WEEKS OF NOVEMBER 7, 14, 21 AND 28, 1908.

[Under the provisions of section 52 of chapter 75 of the Revised Laws.]

	WEEK ENDING —			
	Nov. 7.	Nov. 14.	Nov. 21.	Nov. 28.
Diphtheria,	334	290	303	254
Measles,	108	156	187	185
Scarlet fever,	178	232	178	200
Typhoid fever,	86	65	71	52
Tuberculosis, pulmonary,	123	110	116	107
Cerebro-spinal meningitis,	2	2	1	3
Whooping cough,	18	38	70	90
Varicella,	42	50	63	56
Erysipelas,	—	—	—	1
Mumps,	—	1	—	—
Smallpox,	—	1	—	—
Anthrax,	—	1	—	—
Infantile paralysis,	—	1	—	—
Hydrophobia,	—	—	—	1
Tubercular meningitis,	—	—	—	1

MONTHLY REPORT ON INSPECTION OF FOOD AND DRUGS.

The following summary presents the results of the examination of food and drugs made by the State Board of Health during the month of November, 1908:—

ARTICLES EXAMINED.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.	ARTICLES EXAMINED.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.
Butter,	4	—	4	Meat products:—			
Canned fruit and vegetables.	3	—	3	Canned meat,	2	—	2
Cheese,	4	2	6	Corned beef hash,	1	—	1
Cider,	—	2	2	Hamburg steak,	6	1	7
Cocoa,	2	2	4	H o g s h e a d cheese.	1	—	1
Coffee,	3	—	3	Meat croquette,	2	—	2
Condensed milk,	1	—	1	Mince meat,	3	—	3
Cream,	62	32	94	Pressed meat,	1	—	1
Cream of tartar,	1	—	1	Sausages,	10	2	12
Drugs,	88	12	100	Sausage meat,	1	—	1
Flavoring ex- tracts:—				Milk,	343	52	395
Lemon,	—	1	1	Milk powder,	1	—	1
Vanilla,	4	—	4	Oysters,	1	—	1
Grape juice,	3	—	3	Pickles,	7	—	7
Honey,	2	—	2	Spices,	2	—	2
Jams, jellies and preserves.	2	1	3	Table sauces,	1	2	3
Maple syrup,	2	—	2	Wine,	2	—	2
				Total,	565	109	674

The samples of drugs found to be adulterated were: fluid extract of ginger, syrup, spirit of camphor, spirit of peppermint and tincture of iodine.

The cities and towns in which samples were collected were: Abington, Arlington, Athol, Attleborough, Beverly, Boston, Braintree, Bridgewater, Brookline, Brockton, Cambridge, Danvers, Framingham, Gardner, Gloucester, Holliston, Lawrence, Lowell, Lynn, Malden, Medford, Methuen, Natick, New Bedford, Newburyport, Newton, Peabody, Quincy, Reading, Rehoboth, Rockland, Salem, Somerville, Stoughton, Taunton, Waltham, Watertown, Westfield, Whitman and Woburn.

PROSECUTIONS FOR VIOLATIONS OF THE LAW RELATING TO FOOD AND DRUGS.

Sixteen convictions were secured during the month of November, 1908, for selling adulterated food, as follows:—

No.	Name of Defendant.	Place.	Character of Article sold.
1	John W. Davis,	Reading, . . .	Cream. ¹
2	John Beauregard,	Brockton, . . .	Hamburg steak. ²
3	Daniel W. Case,	Brockton, . . .	Hamburg steak. ²
4	Benjamin V. Loud,	Brockton, . . .	Hamburg steak. ²
5	Nellie Burns,	Saugus, . . .	Milk. ³
6	Seneca Cole,	Attleborough, . . .	Milk (total solids, 11.54).
7	Joseph Duhamel,	Rehoboth, . . .	Milk (total solids, 11.76).
8	William D. Emerson,	Reading, . . .	Milk (total solids, 10.23). ⁴
9	Daniel Green,	Springfield, . . .	Milk (total solids, 11.32).
10	Chas. H. Harrison,	Newbury, . . .	Milk (total solids, 11.51).
11	Maynard C. Lewis,	Attleborough, . . .	Milk (total solids, 11.55). ⁴
12	Maynard C. Lewis,	Attleborough, . . .	Milk (total solids, 11.55). ⁴
13	William H. McCarthy,	Lynn, . . .	Milk (total solids, 11.80).
14	Andrew T. Monahan,	Brockton, . . .	Milk (total solids, 11.00).
15	John Nabad,	Methuen, . . .	Milk (total solids, 11.67).
16	Antonio Tavorier,	Sudbury, . . .	Milk (total solids, 11.00). ⁴

¹ Contained calcium succate.

² Contained compound sulphurous acid.

³ Colored with annato.

⁴ Watered.

Fines imposed, \$579.

LIST OF ADULTERATED OR IMPROPERLY LABELLED FOODS, ETC., FOR NOVEMBER, 1908.

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.	
8695	Cider,	James Kinsley, West Acton, Mass.,	Incorrectly labelled: contained salicylic acid.	
8535	Strawberry preserve,	Twitchell Champlain Company, Portland, Me., and Boston, Mass.	Contained salicylic acid.	
8707	Van Camp's tomato catsup.	Van Camp Packing Company, Indianapolis, Ind.,	Contained benzoic acid.	
8614	Libby's chili sauce,	Libby, McNeil & Libby, Chicago, Ill.,	Contained benzoic acid.	
q 1196	Milk,	George E. Harris & Son, Rockland, Mass.,	Total solids, 10.90 per cent.; contained added water.	
q 1238	Milk,	William Burhol, East Bridgewater, Mass.,	Total solids, 11.27 per cent.; contained added water.	
q 1275	Milk,	W. H. Stoddard, South Braintree, Mass.,	Total solids, 9.56 per cent.; contained added water.	
q 1317	Milk,		Total solids, 10.36 per cent.	
q 1318	Milk,		Total solids, 10.36 per cent.	
q 1319	Milk,	Edward P. Reynolds, 136 Pleasant Valley Street, Methuen, Mass.	Total solids, 10.34 per cent.	
q 1320	Milk,	Fred E. Wellington, Acushnet, Mass.,	Total solids, 10.97 per cent.; contained added water.	
8744	Milk,	Harry G. Batchelder, Conant Street, Danvers, Mass.,	Total solids, 11.36 per cent.	
q 1372	Milk,		Total solids, 11.36 per cent.	
q 1373	Milk,		Total solids, 10.23 per cent.	
8756	Milk,	Jesse H. Whipple, Candlewood Road, Ipswich, Mass.,	Total solids, 9.82 per cent.	
8757	Milk,	Patrick F. Quinn, 565 Bridge Street, Lowell, Mass.,	Total solids, 10.53 per cent.; fat, 2 per cent.; skimmed milk.	
8089 P	Milk,		Total solids, 12.26 per cent.; fat, 3.20 per cent.; proteids, 3.38 per cent.; skimmed milk.	
8289	Milk,	Albert E. Kenneson, Woburn, Mass.,	Total solids, 12.60 per cent.; fat, 3.40 per cent.; proteids, 3.52 per cent.; skimmed milk.	
8291	Milk,		Total solids, 12.40 per cent.; fat, 3.20 per cent.; proteids, 3.45 per cent.; skimmed milk.	
8293	Milk,		Total solids, 12.14 per cent.; fat, 3 per cent.; proteids, 3.30 per cent.; skimmed milk.	
8275	Milk,	Arthur Howland, Dartmouth, Mass.,	Total solids, 11.40 per cent.; fat, 2 per cent.; proteids, 3.67 per cent.; skimmed milk.	
8751	Milk,	John T. Ahlman, Waltham, Mass.,	Total solids, 11.30 per cent.; fat, 2.60 per cent.; proteids, 3.29 per cent.; skimmed milk.	
9462 M	Milk,			

INSPECTION OF DAIRIES.

During the month of November, 1908, 123 dairies were examined in the following places:—

PLACE.	Number examined.	Number found to present no Objectionable Features.	Per Cent.	Number to which Letters were sent.	Per Cent.
Lynnfield,	—	—	—	—	—
Second inspection,	20	11	55.00	9	45.00
Marblehead,	4	3	75.00	1	25.00
Second inspection,	21	11	52.38	10	47.62
Third inspection,	1	1	100.00	—	—
Melrose,	12	7	58.33	5	41.67
Second inspection,	6	4	66.67	2	33.33
Third inspection,	1	1	100.00	—	—
Stoneham,	18	10	55.56	8	44.44
Second inspection,	13	5	38.46	8	61.54
Third inspection,	1	—	—	1	100.00
Wakefield,	9	7	77.78	2	22.22
Second inspection,	12	8	66.67	4	33.33
Wrentham,	1	1	100.00	—	—
Second inspection,	4	2	50.00	2	50.00

Total number of dairies examined,	123
Number found to be free from objectionable conditions,	71
Number to which letters were sent,	52
Total number of conditions to which attention was called,	174
Percentage of dairies which passed inspection,	57.72

The names of the owners of dairies found to be worthy of commendation follow:—

Lynnfield.

Derby, Charles H. ^{1,2}	Griffin, William ¹	Newhall, Warren ¹
DeWolf, John ^{1,2}	Herrick, George E. ¹	Richards, Everett B. ¹
Freeman, Dr. Frank W. ^{1,2}	Latham, C. G. ^{1,2}	Smith, Henry E. ¹
Gerskowitch, H. ¹	Newhall, Frank A. ^{1,2}	

Marblehead.

Adams, Charles ^{1,2}	Hathaway, Misses ^{1,2}	McCauley, Patrick ¹
Barker, George	Hooper, Eben L. ^{1,2}	Pecker, Edward E. ^{1,2}
Bessom, Benjamin B.	Kowalski, J. ^{1,2}	Pitman, Thomas S. ³
Burrage, John B.	Larivee, Fred ^{1,2}	Russell, Joseph W. ^{1,2}
Daniels, Warren ¹	Martin, Benjamin F., Jr. ¹	Sullivan, James ^{1,2}

Melrose.

Atwood, F. W.	Higgins, Thomas ^{1,2}	McDonald, Angus ³
Brown, Mrs. Annie	Levy, George ¹	Richardson, L. H. ¹
Burnett, A. J. ^{1,2}	Lucey, Dennis	Schumann, Oscar
Ford, Joshua ^{1,2}	Manning, John S.	Slocomb, W. H.

¹ Second inspection. ² Reported favorably on first inspection as well. ³ Third inspection.

Stoneham.

Arnold, C. H.
 Barton, G. F.
 Bean & Brown
 Bondrathen, Henry
 Brown, Miss Anna F.

Child, Henry O.
 Dyer, P. A.^{1,2}
 Hill, Levi ¹
 Jandrean, J. A.
 Jones, F. R.¹

McGaffigan, Owen
 Parker, W. B.
 Stoneham Town Farm ¹
 Weston, Fletcher
 Wiley, Frank ¹

Wakefield.

Atkinson, R. C.
 Beebe, Junius ¹
 Carter, Mrs. M. M.^{1,2}
 Chamberlin, Mrs. F. O.
 Finney, Albert ¹

Geith, Michael
 Gutro, P.
 Henry, J. W.
 Humphrey, John
 Paon, Thomas ¹

Shedd, W. W.¹
 Strong, W. C.
 Wakefield Town Farm ^{1,2}
 Ward, Thomas ¹
 Wright, D. C.¹

Wrentham.

Randall, Fred

Smith, William D.^{1,2}

Wrentham Town Farm ¹

ON THE PREVENTION OF THE SPREAD OF TUBERCULOSIS.

The prevalence of tuberculosis can be diminished by knowledge on the part of the people of the nature of the disease, and a general application of the principles underlying its prevention and cure.

Tuberculosis is a disease which spreads from one person to another by germs which gain an entrance to the body generally through the nose or mouth into the lungs, sometimes through the mouth into the stomach and intestines, and rarely through the skin. The germs get into the air mainly from the spit of persons who are suffering with tuberculosis of the lungs. If one member of a family has tuberculosis and does not use care to burn or destroy all spit, this spit dries and becomes a part of the small bits of dust in the air which the other members of the family breathe. In this way brothers and sisters and others in the household may take the disease. In the same way the lives of many people are in constant danger in the hotel, the workshop, the library or the railroad car.

Another way in which germs get into the air is with the particles that fly out from the mouth or nose when persons who have tuberculosis of the lungs neglect to hold a piece of cloth in front of the mouth or nose every time they cough or sneeze.

Because of these ways in which germs get into the air, it has been found necessary to teach persons who are suffering with tuberculosis

¹ Second inspection.

² Reported favorably on first inspection as well.

how to prevent giving the disease to others, and to teach well persons how to protect themselves and children from the careless or ignorant patients. The following instance shows the importance of keeping young children away from persons who are suffering with tuberculosis of the lungs:—

Two little girls were much in the room and about the bed of a young woman who was suffering from tuberculosis of the lungs, although this was not discovered until later. Within three months of that time and within six weeks of each other both died of tuberculosis.

Still another though very rare way in which germs may enter the body is with milk from tuberculous women. Likewise, germs may enter the body with milk from tuberculous cows and with meat from tuberculous animals.

PUBLIC HEALTH.

I. HOW THE STATE PROTECTS THE INDIVIDUAL, AND WHAT INDIVIDUALS SHOULD DO TO PROTECT EACH OTHER.

A. *The Powers and Duties of the State Board of Health and the State Inspectors of Health.*

1. The State Board of Health has for some time been making a careful inspection of dairies and slaughterhouses, in the interest of public health. Milk from unknown sources, or from herds not regularly inspected, should not be given raw to infants or children. Cooking meat and heating milk in a closed vessel for twenty minutes or longer at or above 140° F. destroys any germs present. One especial object of the dairy inspection is to exclude milk from public sale which comes from tuberculous cows, because tuberculosis is occasionally transmitted by cows' milk to human beings. The occasional infection coming from milk leads to swelling of the glands of the neck and to abdominal tuberculosis, but not to tuberculosis of the lungs.

2. The State Inspectors of Health are required to gather all information possible concerning the prevalence of tuberculosis and to take such steps as after consultation with the State Board of Health and the local health authorities shall be deemed necessary for the protection of the public. If any citizen, therefore, knows of a person suffering with tuberculosis who is not receiving proper care, or who, through carelessness and neglect, is endangering others, it is clearly his duty to notify the State Inspector of Health within his district. By so doing the patient himself will receive the best possible care, and the health of others will be properly guarded.

3. The State Inspectors of Health are further required to inform themselves concerning the sanitation and ventilation of factories and workshops in their respective districts, to enforce certain laws relative to the same, and to inform themselves concerning the health of all minors in such establishments. Whenever the family history discloses illness or death of any member due to tuberculosis, the State Inspector of Health makes a physical examination of that minor; and in every instance, whether or not a physical examination is made, a concise report is submitted to the State Board of Health on the immediate sanitary conditions under which the minor works, apart from the general report which covers details relative to the lighting, ventilation and cleanliness of the entire factory.

Private individuals, physicians, social service workers and organizations of various kinds may be of great assistance to the State Inspectors of Health by calling to their attention any known unsanitary conditions, diseases or influences dangerous to the public health or threatening to affect the same. Instances like the following should be reported immediately to the State Inspectors of Health. A young woman who was working in a candy establishment came to a dispensary of an anti-tuberculosis society for examination. She was coughing and spitting. An arrangement was made for her to enter a sanatorium, where she could receive the best care, and be taught how to help herself and to protect the health of others.

4. The law requiring that every public building and every schoolhouse shall be adequately ventilated is to be enforced by the State Inspectors of Health, so that medical inspectors of schools and teachers should notify them of any violation of this law. Notice of any ill-ventilated or overcrowded schoolhouse should be brought to the attention of the State Inspector of Health in whose district the schoolhouse is located.

5. It is particularly desirable that the tenement and dwelling houses and shops where persons work on clothing shall be kept clean, and that the State Inspectors of Health be notified of any infectious or contagious disease present, so that, if an unhealthy condition is found, such orders may be issued as the public safety requires.

6. Suitable receptacles for spitting must be provided in all factories and workshops, and one of the duties of the State Inspectors of Health is to notify the local boards of health and the State Board of Health of any failure to comply with this requirement.

7. Spitting is prohibited, under a penalty of not more than \$20, in or upon any part of any mill or factory and in certain public places and conveyances, as follows: upon any public sidewalk or upon any place

used exclusively or principally by pedestrians, or, except in receptacles provided for the purpose, in or upon any part of any city or town hall, any court house or court room, any public library or museum, any church or theatre, any lecture or music hall, any mill or factory, any hall of any tenement building occupied by five or more families; any school building, any ferryboat or steamboat, any railroad car, except a smoking car, any elevated railroad car, except a smoking car, any street railway car, any railroad or railway station or waiting room, or on any track, platform or sidewalk connected therewith, and included within the limits thereof. The statute provisions permit arrest without a warrant.

B. The Duties of Householders, Physicians, and Local Health Authorities.

1. If a householder knows that a person in his family is sick with tuberculosis, he is expected to notify at once the board of health of the city or town in which he lives. 2. If a physician knows that a person whom he is called to visit has tuberculosis, he must give immediate notice to the board of health. 3. If the board of health has had notice of a case of tuberculosis, it is required to notify the State Board of Health without delay, giving the name and the location of the patient.

C. Instruction in the Public Schools and Medical Inspection of School Children.

1. In accordance with a law passed in March, 1908, special instruction as to tuberculosis and its prevention must be given, as a regular branch of study in connection with the subject of physiology and hygiene, to all pupils in all schools which are supported wholly or partly by public money, except schools which are maintained solely for instruction in particular branches.

2. State laws provide for the examination and diagnosis, by school physicians, of children attending the public schools. Whenever a child shows symptoms of tuberculosis, he shall be sent home and the board of health shall at once be notified. Notice of any child, known to be attending school, who shows signs of being in ill health or of suffering from infectious or contagious disease, may be brought to the attention of the State Inspector of Health in whose district the schoolhouse is located.

D. State Sanatoria for Persons ill with Tuberculosis.

1. The Massachusetts State Sanatorium at Rutland, the first State institution of its kind in this country, provides for the treatment of persons ill with tuberculosis within the Commonwealth. The trustees

and overseers of the Sanatorium are warranted in giving preference to incipient cases. The Sanatorium has no proper accommodations for children, so that persons under fourteen years of age are not admitted.

2. The Legislature of 1907 provided for the construction of three new sanatoria for the treatment of persons ill with tuberculosis. Following are the sites for the buildings: (1) at North Reading, in northeastern Massachusetts; (2) at Lakeville, in southeastern Massachusetts; and (3) at Westfield, near the West Springfield line, in the Connecticut valley. Notice of any person needing to be cared for in such hospitals may be brought to the attention of the State Inspector of Health in whose district the person lives.

II. HOW HEADS OF FAMILIES AND HOUSEHOLDERS MAY PREVENT MEMBERS OF THE HOUSEHOLD FROM TAKING THE DISEASE.

1. Whenever a member of a household is sick with tuberculosis, have the other members, especially the children, examined. Meanwhile, keep young children away from the patient and from the room or rooms in which the patient stays. Allow no nurse or caretaker who has tuberculosis of the lungs to be employed about the children.

2. The bed-rooms are, so far as health is concerned, the most important rooms in the house. Here children spend about half their lives. These rooms should be kept clean and well aired. The windows should be opened wide several times a day. If possible, sunny rooms should be used for bed-rooms, and the windows kept partly open at night to ensure a plentiful supply of fresh air.

3. The patient's bed linen and underclothing should be boiled, and the blankets hung out of doors on every sunny day.

4. Because of danger from drinking cups and other dishes, you should either provide a separate set of dishes for the patient, or require the greatest care to be taken to boil all those which he has used.

5. Carefully clean and disinfect all rooms which you are to occupy where persons with tuberculosis have been housed. Rooms should be made as bare as possible of furnishings which cannot be easily cleaned. Handling dirty and soiled carpets imparts danger to others. Carpets should be dampened before removing them, and all dust should be kept moist. Walls and all woodwork, including floors, should be scrubbed with a hot solution of washing soda. Ceilings should be re-whitened and walls re-papered and painted.

6. Do not occupy immediately a house in which tuberculous persons have been living, without first cleaning and properly disinfecting the house or such parts thereof as have been frequented by the sick. The germs probably do not live after six months, and some of them will be destroyed before that time.

III. HOW THE INDIVIDUAL PATIENT MAY PREVENT MEMBERS OF HIS FAMILY AND OTHER PERSONS FROM TAKING TUBERCULOSIS.

1. When indoors, or in closed cars or vehicles, hold a piece of cloth in front of your mouth or nose every time you cough or sneeze. What you cough up may contain germs which will endanger others if inhaled or swallowed.

2. Use a spit cup which can be properly cleaned, or paper spit cups, paper napkins or some other receptacle which can be destroyed with its contents by burning.

3. When you have used a paper napkin either to spit in or to wipe your mouth with, fold it carefully and put it into a paper bag which you are to carry with you. Destroy the bag with its contents at your earliest opportunity.

4. Do not let any spit get on your clothing or on anything about you, wherever you may be.

5. Always clean your hands before handling food substances of any kind. The following case illustrates a very common danger. A woman of forty-five years had been ill with tuberculosis for eighteen months. Recently one of her three daughters, aged fifteen, was seized with the same disease. During one of her violent coughing spells the mother shielded her mouth with her right hand. Immediately upon stopping she went to the pantry, put her right arm into a bag of apples, took out three apples, polished each of them with her right hand, then passed one to each of her three children, who eagerly ate of the fruit. Not long afterward the oldest daughter was found to have the disease, and later died at a hospital to which she and her mother were sent.

6. Never kiss an infant or a young child. Grown persons may be kissed on the cheek, but not on the lips.

7. Use great care not to come in contact with young children. This is especially necessary when an infant is brought up in a family where the disease prevails.

8. Sleep alone, and, if possible, in a room by yourself.

9. If a mother, you must not nurse your child.

IV. HOW EMPLOYERS MAY GUARD THE HEALTH OF THEIR EMPLOYEES.

1. Factories and workshops should be well ventilated and not overcrowded. Persons who work day after day in rooms which are impossible of ventilation may after a time lose weight and strength, and become ill with tuberculosis. This is especially true of a workshop where many people work side by side, some of whom may at the time be suffering with

tuberculosis of the lungs. One of the most important duties of an employer is to provide fresh air for his employees.

2. Suitable receptacles for spitting should be provided in all factories and workshops, the number and kind depending upon various factors; *e.g.*, the nature of the industry, the cleanliness of the establishment, the employees, etc., — conditions to be determined by the local board of health in the town or city where the factory is located. If metal receptacles are furnished, they should be half filled with water, or better, should contain 1 per cent. carbolic acid, or some chlorinated lime, to prevent flies eating the spit. They should be emptied frequently into some place where the spit can positively do no harm, and should then be scrubbed with boiling, or hot, water containing a little carbonate of soda (washing soda). If such precautions are not taken, the spit dries, and the dried particles containing germs of tuberculosis float about in the air. Flies may carry the germs of tuberculosis if allowed to feed on spit. Should these germs get into the body, tuberculosis may result. On the other hand, the destruction of spit prevents one great means of the spread of the disease.

PERSONAL HEALTH AND HABITS.

I. SUGGESTIONS TO PATIENTS.

1. All nose and throat troubles, a cough which has lasted for some time, a continued flushed face or fever, or the first indication of mouth breathing, should lead you to seek medical aid.

2. Insist upon plenty of fresh air in the sleeping room. Have your bed in that part of the room which is exposed to an abundance of air.

3. Open the windows in all the living rooms often. Let in the sunlight.

4. Stay out of doors whenever you can. A balcony may be fitted up both for sitting and sleeping purposes. Children should live as much as possible in the open air, and every form of sport encouraged which tends to keep them there. A person who is ill with tuberculosis must be where he can be kept in the open air for at least several hours each day, in spite of fever or cough, although it is important that he shall be kept warm while in the open air. Sudden, unnecessary exposure to extreme changes in the weather should be avoided. When a patient is confined to bed, the largest, best-ventilated and sunniest room should be used, and a window should be open most of the time.

5. Wear light underwear of moderate weight, and put on outside wraps according to changes in the weather. Light underwear is cheaper and better.

6. Bathe your neck and chest, front and back, with cold water each

morning. Rub the skin well with a coarse towel. The skin should be red after the bath.

7. Spend your money for good food, rather than for medicines. Patent medicines, or proprietary preparations, or drugs of any kind, should not be taken internally without the advice or consent of a physician in good standing.

8. Avoid fatigue. If you are working, lie down when you have a few moments to spare.

9. Remember that many persons who have suffered with tuberculosis are now well, and that the disease is no longer regarded as incurable.

10. If you are so ill that you cannot recover, you can gain much comfort by protecting the health of those who are near and dear to you.

II. SUGGESTIONS TO THE PUBLIC.

1. Well persons who persist in spitting in places prohibited by law should not forget that some of the persons who are sick with tuberculosis will see them spit and pattern after them, and in this way endanger the lives of others. It is important to acquire clean personal habits, both for the purpose of protecting one's self and others.

2. Every one who has a cough should make an effort to cough as little as possible. By so doing he helps himself and greatly lessens the risk of making others ill.

3. It is not at all uncommon to-day to hear of instances where the very means of obtaining one's livelihood have been taken away because the person was unfortunate enough to have tuberculosis. To take away from such a person the means of obtaining his livelihood is to take it from the very person who needs it most.

It should be remembered that a person ill with tuberculosis, whose personal habits are clean and who takes care of the material which he coughs up, is a safe person to live with, and that he may attend to his work without endangering his fellow workmen. Failure to appreciate this fact is already causing many hardships, which are both unnecessary and unjust.

NAMES OF THE STATE INSPECTORS OF HEALTH.

Health District No. 1. — Dr. Charles E. Morse, Wareham.

Health District No. 2. — Dr. Adam S. MacKnight, Fall River.

Health District No. 3. — Dr. Wallace C. Keith, Brockton.

Health District No. 4. — Dr. Elliott Washburn, Taunton.

Health District No. 5. — Dr. Harry Linenthal, Boston.

Health District No. 6. — Dr. Albert P. Norris, Cambridge.

Health District No. 7. — Dr. J. William Voss, Beverly.

Health District No. 8. — Dr. William Hall Coon, Lawrence.
Health District No. 9. — Dr. Charles E. Simpson, Lowell.
Health District No. 10. — Dr. William W. Walcott, Natick.
Health District No. 11. — Dr. Melvin G. Overlock, Worcester.
Health District No. 12. — Dr. Lewis Fish, Fitchburg.
Health District No. 13. — Dr. Harvey T. Shores, Northampton.
Health District No. 14. — Dr. Herbert C. Emerson, Springfield.
Health District No. 15. — Dr. Lyman A. Jones, North Adams.

TABLE SHOWING HEALTH DISTRICT NUMBER OF EACH CITY OR TOWN IN MASSACHUSETTS.

CITY OR TOWN.	Health District No.	CITY OR TOWN.	Health District No.
Abington,	3	Brewster,	1
Acton,	9	Bridgewater,	3
Acushnet,	2	Brimfield,	14
Adams,	15	Brockton,	3
Agawam,	14	Brookfield,	11
Alford,	15	Brookline,	10
Amesbury,	8	Buckland,	13
Amherst,	13	Burlington,	9
Andover,	8		
Arlington,	9	Cambridge,	6
Ashburnham,	12	Canton,	4
Ashby,	12	Carlisle,	9
Ashfield,	13	Carver,	3
Ashland,	10	Charlemont,	13
Athol,	12	Charlton,	11
Attleborough,	4	Chatham,	1
Auburn,	11	Chelmsford,	9
Avon,	4	Chelsea,	5
Ayer,	9	Cheshire,	15
		Chester,	14
Barnstable,	1	Chesterfield,	13
Barre,	12	Chicopee,	14
Becket,	15	Chilmark,	1
Bedford,	9	Clarksburg,	15
Belchertown,	13	Clinton,	12
Bellingham,	4	Cohasset,	3
Belmont,	10	Colrain,	13
Berkley,	2	Concord,	9
Berlin,	12	Conway,	13
Bernardston,	13	Cummington,	13
Beverly,	7		
Billerica,	9	Dalton,	15
Blackstone,	4	Dana,	12
Blandford,	14	Danvers,	7
Bolton,	12	Dartmouth,	2
Boston,	5	Dedham,	4
Bourne,	1	Deerfield,	13
Boxborough,	9	Dennis,	1
Boxford,	8	Dighton,	2
Boylston,	12	Douglas,	11
Braintree,	4	Dover,	10

TABLE SHOWING HEALTH DISTRICT NUMBER OF EACH CITY OR TOWN IN
MASSACHUSETTS — *Continued.*

CITY OR TOWN.	Health District No.	CITY OR TOWN.	Health District No.
Dracut,	9	Hatfield,	13
Dudley,	11	Haverhill,	8
Dunstable,	9	Hawley,	13
Duxbury,	3	Heath, *	13
East Bridgewater,	3	Hingham,	3
East Longmeadow,	14	Hinsdale,	15
Eastham,	1	Holbrook,	4
Easthampton,	13	Holden,	12
Easton,	4	Holland,	14
Edgartown,	1	Holliston,	10
Egremont,	15	Holyoke,	14
Enfield,	13	Hopedale,	10
Erving,	13	Hopkinton,	10
Essex,	7	Hubbardston,	12
Everett,	6	Hudson,	10
Fairhaven,	2	Hull,	3
Fall River,	2	Huntington,	14
Falmouth,	1	Hyde Park,	4
Fitchburg,	12	Ipswich,	7
Florida,	15	Kingston,	3
Foxborough,	4	Lakeville,	3
Frammingham,	10	Lancaster,	12
Franklin,	4	Lanesborough,	15
Freetown,	2	Lawrence,	8
Gardner,	12	Lee,	15
Gay Head,	1	Leicester,	11
Georgetown,	8	Lenox,	15
Gill,	13	Leominster,	12
Gloucester,	7	Leverett,	13
Goshen,	13	Lexington,	9
Gosnold,	1	Leyden,	13
Grafton,	10	Lincoln,	9
Granby,	13	Littleton,	9
Granville,	14	Longmeadow,	14
Great Barrington,	15	Lowell,	9
Greenfield,	13	Ludlow,	14
Greenwich,	13	Lunenburg,	12
Groton,	9	Lynn,	7
Groveland,	8	Lynnfield,	7
Hadley,	13	Malden,	6
Halifax,	3	Manchester,	7
Hamilton,	7	Mansfield,	4
Hampden,	14	Marblehead,	7
Hancock,	15	Marion,	2
Hanover,	3	Marlborough,	10
Hanson,	3	Marshfield,	3
Hardwick,	12	Mashpee,	1
Harvard,	9	Mattapoisett,	2
Harwich,	1	Maynard,	9

TABLE SHOWING HEALTH DISTRICT NUMBER OF EACH CITY OR TOWN IN
MASSACHUSETTS — *Continued.*

CITY OR TOWN.	Health District No.	CITY OR TOWN.	Health District No.
Medfield,	10	Peabody,	7
Medford,	6	Pelham,	13
Medway,	10	Pembroke,	3
Melrose,	6	Pepperell,	9
Mendon,	10	Peru,	15
Merrimac,	8	Petersham,	12
Methuen,	8	Phillipston,	12
Middleborough,	3	Pittsfield,	15
Middlefield,	14	Plainville,	4
Middleton,	7	Plainfield,	13
Milford,	10	Plymouth,	3
Millbury,	11	Plympton,	3
Millis,	10	Prescott,	13
Milton,	4	Princeton,	12
Monroe,	13	Provincetown,	1
Monson,	14		
Montague,	13	Quincy,	4
Monterey,	15		
Montgomery,	14	Randolph,	4
Mount Washington,	15	Raynham,	4
		Reading,	6
Nahant,	7	Rehoboth,	2
Nantucket,	1	Revere,	5
Natick,	10	Richmond,	15
Needham,	10	Rochester,	2
New Ashford,	15	Rockland,	3
New Bedford,	2	Rockport,	7
New Braintree,	12	Rowe,	13
New Marlborough,	15	Rowley,	8
New Salem,	13	Royalston,	12
Newbury,	8	Russell,	14
Newburyport,	8	Rutland,	12
Newton,	10		
Norfolk,	4	Salem,	7
North Adams,	15	Salisbury,	8
North Andover,	8	Sandisfield,	15
North Attleborough,	4	Sandwich,	1
North Brookfield,	11	Saugus,	7
North Reading,	6	Savoy,	15
Northampton,	13	Scituate,	3
Northborough,	10	Seekonk,	2
Northbridge,	11	Sharon,	4
Northfield,	13	Sheffield,	15
Norton,	4	Shelburne,	13
Norwell,	3	Sherborn,	10
Norwood,	4	Shirley,	9
		Shrewsbury,	10
Oak Bluffs,	1	Shutesbury,	13
Oakham,	12	Somerset,	2
Orange,	13	Somerville,	6
Orleans,	1	South Hadley,	13
Otis,	15	Southampton,	13
Oxford,	11	Southborough,	10
Palmer,	14	Southbridge,	11
Paxton,	12	Southwick,	14

TABLE SHOWING HEALTH DISTRICT NUMBER OF EACH CITY OR TOWN IN MASSACHUSETTS — *Concluded.*

CITY OR TOWN.	Health District No.	CITY OR TOWN.	Health District No.
Spencer,	11	Wayland,	10
Springfield,	14	Webster,	11
Sterling,	12	Wellesley,	10
Stockbridge,	15	Wellfleet,	1
Stoneham,	6	Wendell,	13
Stoughton,	4	Wenham,	7
Stow,	9	West Boylston,	12
Sturbridge,	11	West Bridgewater,	3
Sudbury,	10	West Brookfield,	11
Sunderland,	13	West Newbury,	8
Sutton,	11	West Springfield,	14
Swampscott,	7	West Stockbridge,	15
Swansea,	2	West Tisbury,	1
		Westborough,	10
Taunton,	4	Westfield,	14
Templeton,	12	Westford,	9
Tewksbury,	9	Westhampton,	13
Tisbury,	1	Westminster,	12
Tolland,	14	Weston,	10
Topsfield,	7	Westport,	2
Townsend,	9	Westwood,	4
Truro,	1	Weymouth,	3
Tyngsborough,	9	Whately,	13
Tyringham,	15	Whitman,	3
		Wilbraham,	14
Upton,	10	Williamsburg,	13
Uxbridge,	11	Williamstown,	15
		Wilmington,	9
Wakefield,	6	Winchendon,	12
Wales,	14	Winchester,	9
Walpole,	4	Windsor,	15
Waltham,	10	Winthrop,	5
Ware,	13	Woburn,	9
Wareham,	1	Worcester,	11
Warren,	11	Worthington,	14
Warwick,	13	Wrentham,	4
Washington,	15		
Watertown,	10	Yarmouth,	1

THE SALE OF MRS. WINSLOW'S SOOTHING SYRUP.

On April 17, 1908, the following notice was published:—

Notice is hereby given that the gift, exchange or sale at retail of the following proprietary medicines is contrary to the provisions of chapter 386 of the Acts of 1906:—

Mrs. Winslow's Soothing Syrup. The Anglo-American Drug Company, 215-217 Fulton Street, New York City. . . .

This preparation, as now presented to the trade, properly labelled, may be sold at retail.

MONTHLY BULLETIN

OF THE

STATE BOARD OF HEALTH

OF

MASSACHUSETTS.

An official publication of the State Board of Health of Massachusetts, issued monthly from the office of the Board, 141 State House, Boston, Mass.

New Series. DECEMBER, 1908. Vol. 3. No. 12.

ENTERED AT THE POST-OFFICE AT BOSTON, FEB. 15, 1906, AS SECOND-CLASS MATTER. ACT OF JULY 16, 1894.

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BOSTON
WRIGHT & POTTER PRINTING CO., STATE PRINTERS
18 POST OFFICE SQUARE
1908

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WEEKLY RETURNS OF DEATHS FROM CITIES AND TOWNS OF MORE THAN 10,000 POPULATION.

WEEK ENDING DEC. 5, 1908.

CITIES AND TOWNS.	Population, ¹ Esti- mated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM—						
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Pnthisis.	Diphtheria.	Typhoid Fever.	Measles.	
Boston,	617,082	234	65	86	40	18	2	1	3	
Worcester,	134,341	39	11	15	5	3	5	—	—	
Fall River,	106,305	27	9	15	7	—	1	2	—	
Cambridge,	100,922	30	10	11	4	3	2	—	—	
Lowell,	96,380	29	7	8	6	—	1	—	—	
Lynn,	82,661	21	4	2	—	1	1	—	—	
New Bedford,	82,580	24	7	6	5	—	—	—	—	
Springfield,	81,425	20	4	2	1	—	1	—	—	
Lawrence,	78,000	29	8	10	4	4	1	—	—	
Somerville,	74,295	20	5	6	4	1	—	—	—	
Brockton,	53,131	11	3	3	1	2	—	—	—	
Holyoke,	52,652	20	5	9	3	4	1	—	—	
Malden,	40,929	9	—	2	2	—	—	—	—	
Chelsea,	39,363	4	0	—	—	—	—	—	—	
Newton,	38,919	6	—	1	1	—	—	—	—	
Salem,	38,666	5	4	4	1	2	—	—	—	
Haverhill,	38,228	9	1	2	1	1	—	—	—	
Fitchburg,	33,948	11	2	2	—	1	—	1	—	
Everett,	32,415	6	3	1	—	—	1	—	—	
Taunton,	30,967	11	3	7	5	2	—	—	—	
Quincy,	30,924	6	1	2	1	—	1	—	—	
Waltham,	28,120	7	1	2	—	1	1	—	—	
Pittsfield,	27,168	7	—	2	1	1	—	—	—	
Gloucester,	26,011	14	—	1	—	1	—	—	—	
Brookline,	25,825	6	1	2	2	—	—	—	—	
North Adams,	22,150	4	3	—	—	—	—	—	—	
Chicopee,	20,831	7	4	1	1	—	—	—	—	
Northampton,	20,789	5	1	2	2	—	—	—	—	
Medford,	20,605	3	1	—	—	—	—	—	—	
Beverly,	16,088	3	—	—	—	—	—	—	—	
Leominster,	15,578	10	4	5	2	—	—	—	3	
Hyde Park,	15,327	5	2	—	—	—	—	—	—	
Melrose,	15,160	3	2	2	1	—	1	—	—	
Newburyport,	14,794	4	—	—	—	—	—	—	—	
Woburn,	14,492	6	—	—	—	—	—	—	—	
Westfield,	14,457	8	3	4	2	1	1	—	—	
Marlborough,	14,359	5	2	2	—	2	—	—	—	
Revere,	14,248	2	—	—	—	—	—	—	—	
Attleborough,	13,600	3	1	—	—	—	—	—	—	
Peabody,	14,144	—	—	—	—	—	—	—	—	
Adams,	13,375	2	—	—	—	—	—	—	—	
Clinton,	13,105	5	1	3	—	3	—	—	—	
Gardner,	12,794	2	1	1	—	—	1	—	—	
Milford,	12,565	4	—	—	—	—	—	—	—	
Watertown,	12,306	2	0	—	—	—	—	—	—	
Plymouth,	12,149	—	—	—	—	—	—	—	—	
Weymouth,	11,744	2	1	—	—	—	—	—	—	
Framingham,	11,698	3	—	—	—	—	—	—	—	
Southbridge,	11,630	5	1	1	—	1	—	—	—	
Wakefield,	10,903	—	—	—	—	—	—	—	—	
Webster,	10,825	—	—	—	—	—	—	—	—	
Arlington,	10,307	1	1	1	—	—	—	—	—	

Recapitulation.

Total of reporting towns,	2,333,259	699	182	223	102	52	21	4	6
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¹ The populations were estimated upon the rate of growth from 1900 to 1905. Those of Taunton, Gloucester, North Adams and Clinton were allowed to stand as in 1905, having shown no increase during the five-year period. The gain in the population of Lowell is due to the annexation of a part of the town of Tewksbury. The population of Lawrence by the census of 1905 was 70,050, but, owing to the building of the new Wood and Arlington mills, employing at present some 3,000 operatives, an increase of about 8,000 is estimated by the Lawrence board of health, or 78,000.

WEEK ENDING DEC. 12, 1908.

CITIES AND TOWNS.	Population. Esti- mated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —						
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.	
Boston,	617,082	208	59	68	33	14	9	2	1	
Worcester,	134,341	39	8	7	2	3	1	-	-	
Fall River,	106,305	33	17	23	16	-	-	-	-	
Cambridge,	100,922	26	10	9	5	2	-	-	-	
Lowell,	96,380	34	7	10	8	1	1	-	-	
Lynn,	82,661	19	6	1	-	3	-	-	-	
New Bedford,	82,580	22	8	9	5	2	1	-	-	
Springfield,	81,425	22	6	7	4	2	1	-	-	
Lawrence,	78,000	23	7	7	5	2	-	-	-	
Somerville,	74,295	18	5	2	-	1	-	-	-	
Brockton,	53,131	5	1	1	1	-	-	-	-	
Holyoke,	52,652	17	10	7	6	-	-	-	-	
Malden,	40,929	13	3	2	-	1	1	-	-	
Chelsea,	39,363	8	1	1	-	-	-	-	-	
Newton,	38,919	4	1	2	1	-	-	1	-	
Salem,	38,666	15	5	2	-	-	-	-	-	
Haverhill,	38,228	9	0	1	1	-	-	-	-	
Fitchburg,	33,948	11	4	5	2	1	1	-	-	
Everett,	32,415	7	0	2	-	2	-	-	-	
Taunton,	30,967	22	3	8	4	2	-	-	-	
Quincy,	30,924	6	2	4	2	-	1	-	-	
Waltham,	28,120	7	2	4	1	2	1	-	-	
Pittsfield,	27,168	9	1	2	1	1	-	-	-	
Gloucester,	26,011	8	6	3	-	1	-	-	-	
Brookline,	25,825	5	1	-	-	-	-	-	-	
North Adams,	22,150	11	2	-	-	-	-	-	-	
Chicopee,	20,831	6	3	1	1	-	-	-	-	
Northampton,	20,789	6	-	-	-	-	-	-	-	
Medford,	20,605	8	-	1	1	-	-	-	-	
Beverly,	16,088	4	1	2	2	-	-	-	-	
Leominster,	15,578	7	4	4	-	1	-	-	2	
Hyde Park,	15,327	1	-	-	-	-	-	-	-	
Melrose,	15,160	4	1	-	-	-	-	-	-	
Newburyport,	14,794	5	1	1	-	-	-	1	-	
Woburn,	14,492	4	1	1	-	1	-	-	-	
Westfield,	14,457	3	-	1	-	1	-	-	-	
Marlborough,	14,359	4	1	-	-	-	-	-	-	
Revere,	14,248	1	-	-	-	-	-	-	-	
Attleborough,	13,600	4	0	-	-	-	-	-	-	
Peabody,	14,144	-	-	-	-	-	-	-	-	
Adams,	13,375	3	1	-	-	-	-	-	-	
Clinton,	13,105	2	0	1	-	1	-	-	-	
Gardner,	12,794	2	-	-	-	-	-	-	-	
Milford,	12,565	1	0	-	-	-	-	-	-	
Watertown,	12,306	1	0	-	-	-	-	-	-	
Plymouth,	12,149	-	-	-	-	-	-	-	-	
Weymouth,	11,744	4	0	-	-	-	-	-	-	
Framingham,	11,698	4	2	1	-	1	-	-	-	
Southbridge,	11,630	4	1	2	1	1	-	-	-	
Wakefield,	10,903	-	-	-	-	-	-	-	-	
Webster,	10,825	-	-	-	-	-	-	-	-	
Arlington,	10,307	4	2	2	-	1	-	-	-	

Recapitulation.

Total of reporting towns, .	2,333,259	683	193	204	102	47	17	4	3
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WEEK ENDING DEC. 19, 1908.

CITIES AND TOWNS.	Population. Esti- mated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM—					
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	617,082	247	83	97	50	24	5	1	4
Worcester,	134,341	33	15	8	5	1	-	-	-
Fall River,	106,305	40	12	18	11	2	-	-	-
Cambridge,	100,922	36	14	20	12	3	-	-	-
Lowell,	96,380	25	7	8	4	3	-	1	-
Lynn,	82,661	24	6	7	-	5	-	1	-
New Bedford,	82,580	18	5	3	1	1	-	-	-
Springfield,	81,425	25	8	3	1	2	-	-	-
Lawrence,	78,000	26	8	10	1	6	2	-	1
Somerville,	74,295	15	2	4	2	1	-	-	-
Brockton,	53,131	6	2	1	1	-	-	-	-
Holyoke,	52,652	18	6	5	1	2	1	-	-
Malden,	40,929	14	2	3	1	1	1	-	-
Chelsea,	39,363	5	2	-	-	-	-	-	-
Newton,	38,919	9	3	1	1	-	-	-	-
Salem,	38,666	13	3	6	4	1	1	-	-
Haverhill,	38,228	12	3	2	-	2	-	-	-
Fitchburg,	33,948	6	1	2	-	1	1	-	-
Everett,	32,415	3	2	1	-	1	-	-	-
Taunton,	30,967	12	3	5	2	3	-	-	-
Quincy,	30,924	12	6	8	7	1	-	-	-
Waltham,	28,120	4	1	-	-	-	-	-	-
Pittsfield,	27,168	6	0	2	-	2	-	-	-
Gloucester,	26,011	7	1	3	-	1	-	-	-
Brookline,	25,825	7	-	2	1	-	-	1	-
North Adams,	22,150	6	1	-	-	-	-	-	-
Chicopee,	20,831	9	4	3	3	-	-	-	-
Northampton,	20,789	6	2	1	-	1	-	-	-
Medford,	20,605	5	1	3	2	1	-	-	-
Beverly,	16,088	8	3	2	2	-	-	-	-
Leominster,	15,578	3	-	-	-	-	-	-	-
Hyde Park,	15,327	3	0	-	-	-	-	-	-
Melrose,	15,160	6	0	1	1	-	-	-	-
Newburyport,	14,794	6	-	1	1	-	-	-	-
Woburn,	14,492	2	0	1	-	1	-	-	-
Westfield,	14,457	4	2	2	1	-	-	-	1
Marlborough,	14,359	4	1	-	-	-	-	-	-
Revere,	14,248	3	-	3	1	2	-	-	-
Attleborough,	13,600	2	1	1	1	-	-	-	-
Peabody,	14,144	-	-	-	-	-	-	-	-
Adams,	13,375	2	-	-	-	-	-	-	-
Clinton,	13,105	1	0	1	-	-	-	1	-
Gardner,	12,794	4	2	2	-	-	2	-	-
Milford,	12,565	1	1	-	-	-	-	-	-
Watertown,	12,306	2	1	1	-	-	-	-	-
Plymouth,	12,149	-	-	-	-	-	-	-	-
Weymouth,	11,744	2	1	-	-	-	-	-	-
Framingham,	11,698	1	1	-	-	-	-	-	-
Southbridge,	11,630	4	1	1	1	-	-	-	-
Wakefield,	10,903	-	-	-	-	-	-	-	-
Webster,	10,825	-	-	-	-	-	-	-	-
Arlington,	10,307	5	1	2	-	1	-	-	-

Recapitulation.

Total of reporting towns,	2,333,259	712	218	244	118	69	13	5	6
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WEEK ENDING DEC. 26, 1908.

CITIES AND TOWNS.	Population. Est- imated for 1908.	Reported Deaths in Each.	Deaths under Five Years.	DEATHS FROM —					
				Principal In- fectious Dis- eases.	Acute Lung Diseases.	Phthisis.	Diphtheria.	Typhoid Fever.	Measles.
Boston,	617,082	215	60	70	36	19	1	2	1
Worcester,	134,341	40	6	9	3	6	—	—	—
Fall River,	106,305	42	19	17	10	1	1	—	—
Cambridge,	100,922	27	11	13	5	1	3	1	—
Lowell,	96,380	20	6	5	1	3	1	—	—
Lynn,	82,661	12	2	3	—	1	—	—	—
New Bedford,	82,580	25	13	9	4	2	—	—	—
Springfield,	81,425	29	7	8	4	2	—	—	—
Lawrence,	78,000	23	9	9	6	—	2	—	1
Somerville,	74,295	15	5	7	4	2	1	—	—
Brockton,	53,131	12	1	4	1	3	—	—	—
Holyoke,	52,652	15	6	6	4	1	1	—	—
Malden,	40,929	16	6	2	—	—	1	—	—
Chelsea,	39,363	8	1	2	—	1	—	—	—
Newton,	38,919	13	3	3	—	2	1	—	—
Salem,	38,666	8	2	3	2	1	—	—	—
Haverhill,	38,228	12	1	—	—	—	—	—	—
Fitchburg,	33,948	6	1	—	—	—	—	—	—
Everett,	32,415	10	2	1	—	—	—	—	—
Taunton,	30,967	14	4	7	2	2	—	1	—
Quincy,	30,924	10	4	3	1	2	—	—	—
Waltham,	28,120	8	1	2	—	—	1	—	—
Pittsfield,	27,168	—	—	—	—	—	—	—	—
Gloucester,	26,011	—	—	—	—	—	—	—	—
Brookline,	25,825	3	1	—	—	—	—	—	—
North Adams,	22,150	—	—	—	—	—	—	—	—
Chicopee,	20,831	3	2	—	—	—	—	—	—
Northampton,	20,789	9	0	—	—	—	—	—	—
Medford,	20,605	2	—	—	—	—	—	—	—
Beverly,	16,088	3	1	2	2	—	—	—	—
Leominster,	15,578	4	1	2	2	—	—	—	—
Hyde Park,	15,327	3	1	—	—	—	—	—	—
Melrose,	15,160	3	2	—	—	—	—	—	—
Newburyport,	14,794	4	1	1	—	—	1	—	—
Woburn,	14,492	6	0	—	—	—	—	—	—
Westfield,	14,457	4	—	—	—	—	—	—	—
Marlborough,	14,359	5	0	—	—	—	—	—	—
Revere,	14,248	3	2	1	1	—	—	—	—
Attleborough,	13,600	4	1	—	—	—	—	—	—
Peabody,	14,144	—	—	—	—	—	—	—	—
Adams,	13,375	2	—	2	1	—	—	—	—
Clinton,	13,105	1	0	—	—	—	—	—	—
Gardner,	12,794	5	1	3	2	1	—	—	—
Milford,	12,565	1	0	1	—	1	—	—	—
Watertown,	12,306	1	0	—	—	—	—	—	—
Plymouth,	12,149	—	—	—	—	—	—	—	—
Weymouth,	11,744	4	0	2	1	1	—	—	—
Framingham,	11,698	3	—	—	—	—	—	—	—
Southbridge,	11,630	4	1	—	—	—	—	—	—
Wakefield,	10,903	—	—	—	—	—	—	—	—
Webster,	10,825	—	—	—	—	—	—	—	—
Arlington,	10,307	5	—	3	—	1	—	1	—

Recapitulation.

Total of reporting towns,	2,257,930	662	184	200	92	53	14	5	3
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WEEKLY RETURNS OF DEATHS FROM CERTAIN INFECTIOUS DISEASES.

DEATHS FROM INFECTIOUS DISEASES NOT SPECIFICALLY MENTIONED IN ABOVE TABLES DURING THE WEEKS OF DECEMBER 5, 12, 19 AND 26, 1908.

DISEASE.	Place.	WEEK ENDING—			
		Dec. 5.	Dec. 12.	Dec. 19.	Dec. 26.
Cerebro-spinal meningitis, .	Boston, . . .	1	1	3	—
	Fitchburg, . . .	—	1	—	—
	Lowell, . . .	1	—	—	—
	Worcester, . . .	—	—	1	—
Scarlet fever,	Arlington, . . .	1	1	1	—
	Boston, . . .	4	3	3	4
	Chelsea, . . .	—	1	—	—
	Everett, . . .	—	—	—	1
	Fall River, . . .	1	—	—	—
	Gloucester, . . .	—	1	1	—
	Lynn, . . .	—	—	—	1
	Malden, . . .	—	—	—	1
	Salem, . . .	1	—	—	—
	Waltham, . . .	—	—	—	1
	Worcester, . . .	—	1	—	—
Whooping cough,	Boston, . . .	4	3	2	1
	Cambridge, . . .	1	—	3	1
	Chelsea, . . .	—	—	—	1
	Gloucester, . . .	—	1	1	—
	Holyoke, . . .	—	1	—	—
	New Bedford, . . .	—	—	1	2
	Taunton, . . .	—	—	—	2
Meningitis, other than cerebro-spinal.	Leominster, . . .	—	1	—	—
	Lynn, . . .	—	1	1	1
	Salem, . . .	—	1	—	—
	Watertown, . . .	—	—	1	—
Tuberculosis other than pulmonary.	Arlington, . . .	—	—	—	1
Erysipelas,	Boston, . . .	—	—	1	—
	Somerville, . . .	—	1	—	—
	Taunton, . . .	—	1	—	—

WEEKLY RETURNS OF CASES OF INFECTIOUS DISEASES.

CASES OF INFECTIOUS DISEASES REPORTED DURING THE WEEKS OF DECEMBER 5, 12, 19 AND 26, 1908.

[Under the provisions of section 52 of chapter 75 of the Revised Laws.]

	WEEK ENDING —			
	Dec. 5.	Dec. 12.	Dec. 19.	Dec. 26.
Diphtheria,	251	277	269	228
Measles,	185	192	175	168
Scarlet fever,	184	211	173	155
Typhoid fever,	59	42	54	45
Tuberculosis, pulmonary,	114	110	146	82
Cerebro-spinal meningitis,	2	6	2	1
Whooping cough,	85	56	38	80
Varicella,	96	80	80	74
Erysipelas,	2	2	1	—
Mumps,	1	—	—	—
Meningitis other than cerebro-spinal,	—	—	2	—
Tracoma,	—	—	1	—
Impetigo contagiosa,	—	—	1	—
Ophthalmia neonatorum,	—	1	—	—

MONTHLY REPORT ON INSPECTION OF FOOD AND DRUGS.

The following summary presents the results of the examination of food and drugs made by the State Board of Health during the month of December, 1908:—

ARTICLES EXAMINED.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.	ARTICLES EXAMINED.	Number found to be of Good Quality.	Number adulterated or varying from the Legal Standard.	Total.
Butter,	8	2	10	Meat products:—			
Canned fish,	1	—	1	Hamburg steak,	3	2	5
Canned fruit,	1	—	1	Lambs' tongues,	1	—	1
Cheese,	2	—	2	Mince meat,	5	—	5
Cider,	4	1	5	Pigs' feet,	1	—	1
Clams and oysters,	6	—	6	Pressed meat,	1	—	1
Cocoa,	3	—	3	Sausages,	28	13	41
Coffee,	1	—	1	Milk,	231	45	276
Condensed milk,	4	—	4	Pickles,	2	—	2
Confectionery,	2	—	2	Spices,	1	—	1
Cream,	18	—	18	Table sauces,	2	—	2
Cream of tartar,	1	—	1	Vinegar,	1	—	1
Drugs,	31	6	37	Total,	365	69	434
Honey,	2	—	2				
Jams, jellies and preserves,	5	—	5				

The samples of drugs found to be adulterated were: olive oil, spirit of peppermint, and tincture of iodine.

The cities and towns in which samples were collected were: Abington, Arlington, Auburndale, Boston, Braintree, Cambridge, Haverhill, Ipswich, Lawrence, Lincoln, Lowell, Lynn, Malden, Melrose, Middleborough, Natick, Newton, New Bedford, North Reading, Peabody, Quincy, Revere, Rochester, Salem, Somerville, Springfield, Stoneham, Waltham, Wareham, Watertown, Wellesley, Westford, Woburn and Worcester.

PROSECUTIONS FOR VIOLATIONS OF THE LAW RELATING TO FOOD AND DRUGS.

Thirty convictions were secured during the month of December, 1908, for selling adulterated food, as follows:—

No.	Name of Defendant.	Place.	Character of Article sold.
1	John W. Davis,	Reading,	Cream. ¹
2	George Dee, agent H. P. Hood & Sons.	Lynn,	Cream. ¹
3	James P. Murphy, agent H. P. Hood & Sons.	Watertown,	Cream. ^{1,2}
4	Simon Piletzky,	Boston,	Hamburg steak. ³
5	Felice Lauricella,	Boston,	Iodine. ⁴
6	John T. Ahlman,	Waltham,	Milk (total solids, 11.30). ⁵
7	John Bedard,	Rochester,	Milk (total solids, 11.82). ⁶
8	John Bedard,	Rochester,	Milk (total solids, 11.86). ⁶
9	Wm. D. Emerson,	Reading,	Milk (total solids, 10.23). ⁶
10	John C. Fox,	Dracut,	Milk (total solids, 8.74). ⁶
11	John C. Fox,	Dracut,	Milk (total solids, 9.50). ⁶
12	Martial G. Gagne,	Lawrence,	Milk (total solids, 11.40). ²
13	Ernest Harnisch,	Methuen,	Milk (total solids, 11.32). ⁴
14	William Horgan,	Salem,	Milk (total solids, 11.36). ⁶
15	Arthur Howland,	Dartmouth,	Milk. ⁵
16	Nicklos Kafalas,	Ipswich,	Milk (total solids, 11.20). ⁶
17	George Kafalas,	Ipswich,	Milk (total solids, 11.52). ⁴
18	Albert E. Kenneson,	Woburn,	Milk (total solids, 12.14). ⁵
19	Albert E. Kenneson,	Woburn,	Milk (total solids, 12.26). ⁵
20	John G. McPhee,	Ipswich,	Milk (total solids, 9.82). ⁶
21	John G. McPhee,	Ipswich,	Milk (total solids, 9.70). ⁶
22	Edward P. Reynolds,	Methuen,	Milk (total solids, 10.34). ⁶
23	Edward P. Reynolds,	Methuen,	Milk (total solids, 10.34). ⁶
24	William J. Whalen,	Woburn,	Milk (total solids, 11.74). ⁴
25	Jesse H. Whipple,	Ipswich,	Milk (total solids, 9.82). ⁶
26	Jesse H. Whipple,	Ipswich,	Milk (total solids, 10.23). ⁶
27	Herbert B. Hathaway,	Arlington,	Sausage. ³
28	Herbert B. Hathaway,	Arlington,	Sausage (tomato). ³
29	Herbert B. Hathaway,	Arlington,	Sausage. ³
30	Herbert B. Hathaway,	Arlington,	Sausage (tomato). ³

¹ Contained calcium sucrate.

² Appealed.

³ Contained sodium sulphite.

⁴ Below standard.

⁵ Skimmed cans not marked.

⁶ Watered.

Fines imposed, \$805.

LIST OF ADULTERATED OR IMPROPERLY LABELLED FOODS, ETC., FOR DECEMBER, 1908.

Number of Sample.	Character of Sample.	Name of Manufacturer, Wholesaler or Producer.	Results of Analyses.
9528 M	Milk,	George & Nicholas Kafalas, Ipswich, Mass.,	Total solids, 11.20 per cent.; contained added water.
q 1416 }	.	.	Total solids, 8.74 per cent.; contained added water.
q 1412 }	Milk,	John C. Fox, Dracut, Mass.,	Total solids, 9.50 per cent.; contained added water.
8838 }	.	.	Total solids, 11.82 per cent.; contained added water.
8839 }	Milk,	John Bedard, Rochester, Mass.,	Total solids, 10.86 per cent.; contained added water.
8589 P	Milk,	George W. Mansfield, Lynn, Mass.,	Total solids, 8.42 per cent.; contained added water.
8846	Tincture of iodine,	Pease's Prescription Pharmacy, New Bedford, Mass.,	57.5 per cent. U. S. P. strength.

INSPECTION OF DAIRIES.

During the month of December, 1908, 154 dairies were examined in the following places:—

PLACE.	Number examined.	Number found to present no Objectionable Features.	Per Cent.	Number to which Letters were sent.	Per Cent.
Billerica,	2	2	100.00	—	—
Second inspection, . . .	34	22	64.71	12	35.29
Chelmsford,	1	1	100.00	—	—
Second inspection, . . .	49	27	55.10	22	44.90
Everett,	—	—	—	—	—
Second inspection, . . .	1	1	100.00	—	—
Hubbardston,	6	1	16.67	5	83.33
Second inspection, . . .	1	—	—	1	100.00
Medford,	4	2	50.00	2	50.00
Second inspection, . . .	11	8	72.73	3	27.27
Third inspection,	1	1	100.00	—	—
North Reading,	3	—	—	3	100.00
Second inspection, . . .	21	16	76.19	5	23.81
Third inspection,	2	1	50.00	1	50.00
Reading,	2	1	50.00	1	50.00
Second inspection, . . .	15	13	86.67	2	13.33
Worcester,	1	—	—	1	100.00

Total number of dairies examined,	154
Number found to be free from objectionable conditions,	96
Number to which letters were sent,	58
Total number of conditions to which attention was called,	193
Percentage of dairies which passed inspection,	62.34

The names of the owners of dairies found to be worthy of commendation follow:—

Billerica.

Billerica Town Farm ¹	Essex, William ¹	Parker, J. W. ^{1,2}
Burton, S. J. ¹	Forster, John ¹	Richardson, Mrs. S. E. ¹
Callahan, Daniel ¹	Greenwood, G. P. ¹	Rollins, V.
Carney, Joseph ¹	Jones, A. H. ¹	Rowell, John ¹
Cook, James ¹	Maybury, O. ^{1,2}	Sanford, J.
Corkum, D. L. ¹	Moore, George ¹	Simonds, George E. ^{1,2}
Duren, Henry ¹	Morris, W. E. ^{1,2}	Smith, C. ^{1,2}
Dutton, D. Wesley ¹	Nichols, Mrs. A. ¹	Stearns, John ¹

Chelmsford.

Andrews, Edward ^{1,2}	Brown, Joseph H. ^{1,2}	Chelmsford Town Farm ¹
Berry, Warren ¹	Byam, Charles ^{1,2}	Edwards, William C. ^{1,2}
Blaisdell, A. M. ¹	Byam, Daniel P. ¹	Hutchinson, Frank ¹
Bliss, P. C. ¹	Byam, Frank ¹	Kelley, Patrick ¹
Blodgett, F. F. ¹	Byam, John ¹	Marshall, F. A. ¹

¹ Second inspection.² Reported favorably on first inspection as well.

McFarlin, Miss E.^{1,2}
 Paignon, E., Jr.¹
 Parker, William S.¹
 Perham, E. C.^{1,2}
 Perham, Walter ¹

Phillips, J. B.¹
 Randlett, Charles A.¹
 Robbins, B. O.¹
 Thompson, A. G.¹

Warren, Joseph ¹,
 Wilson, W. C.¹
 Wood, William
 Wright, Edward ¹

Everett.

Roberts, E.¹

Hubbardston.

Morgan, Paul B.

Medford.

Atherton, Caleb ^{1,2}
 Bay State Milk Co.³
 Bultken, Louis H.
 French, J. S.^{1,2}

Griffith, James
 Hutchinson, F. E.^{1,2}
 Kirk, D. T.^{1,2}
 Morse, Mrs. G. T.^{1,2}

Mulkerin, J. J.^{1,2}
 Tainter, A. H.¹
 Willis, H. E.^{1,2}

North Reading.

Batchelder, Mrs. E. A.¹
 Case, F. W.¹
 Dearing, Bros.^{1,2}
 Eames, J. A.^{1,2}
 Forsythe, C. R.^{1,2}
 Gould, William ^{1,2}

Haywood, G. H.¹
 Hinman, G. R.¹
 Lindsley, James ^{1,2}
 Nichols, Charles H.¹
 North Reading Town Farm ¹
 Pringle, R. E.¹

Stratton, Charles ^{1,2}
 Turner, J. A.¹
 Turner, W. P. ³
 Upton, Henry A.^{1,2}
 Upton, W. F.^{1,2}

Reading.

Bancroft, W. A.¹
 Blanchard, George ^{1,2}
 Elm Stock Farm Dairy Co.^{1,2}
 Emerson, W. D.¹
 Gleason, Rodney ^{1,2}

Lewis, L. B.^{1,2}
 Mellon, Henry ^{1,2}
 Nichols, Edward E.¹
 Nichols, J. Brooks ^{1,2}
 Parker, W. S.^{1,2}

Sanborn, D. C.
 Wakefield, George ^{1,2}
 Webb, Edward ^{1,2}
 Welsh, William ¹

MILK AS A CARRIER OF INFECTION.⁴

By CHARLES HARRINGTON, M.D., Boston, late Secretary of the State Board of Health of Massachusetts; Professor of Hygiene, Harvard Medical School.

"It appears that the only way to ensure reducing milk-borne infection is State and municipal regulation of dairies and distribution."

While tuberculosis is the only disease which man and the bovine species have in common, cows' milk acts as a vehicle for the exciting causes of a number of man's most common disorders; and since these causes are for

¹ Second inspection.

² Reported favorably on first inspection as well.

³ Third inspection.

⁴ Reprinted from the New York Medical Journal for April 13, 1907.

the most part not present in the udder, it follows that they must be introduced into the milk after it leaves the teats.

It is not my intention to attempt a discussion of the probable or possible causal relation of tuberculous milk to human tuberculosis, that subject being sufficiently large and complex to have warranted the appointment of a number of governmental commissions thereon, but to deal with the transmission of nonbovine diseases by specifically contaminated milk.

It is now just a half century since it was first suggested that typhoid outbreaks may sometimes be due to infected milk, the circumstances which led to the idea being the occurrence of 13 cases of typhoid fever in 7 of 14 families supplied with milk from the same farm, the prior introduction of the disease into the household of the farmer by an infected domestic, and seizure of 2 of his children. The report of this outbreak excited no particular interest, and no other similar cases were reported during a period of ten years, when it fell to the lot of the same observer to record 15 cases of scarlet fever in 6 of 14 families supplied by a small farmer, whose four cows were milked by his wife, who, at the same time, was nursing a child fatally ill with the same disease. A few years later reports of outbreaks attributed to contaminated milk began to appear with considerable frequency, and before long the number grew to far more than a hundred, a very considerable proportion of which, it must be confessed, were based upon somewhat flimsy evidence, as is usually the case when incredulity and indifference concerning a departure from accepted ideas are succeeded by enthusiastic acceptance. Then it began to appear that milk supplies were indeed worthy of the attention of public authorities, and now in case of sudden, small outbreaks, the milk is often suspected at once; and the suspicion appears to have been justified in several hundred instances.

At present, it is known that the nonbovine diseases capable of being spread by milk include typhoid fever, dysentery, scarlet fever, diphtheria, and the group of diarrhoeal diseases which we miscall "*cholera infantum*." Excepting the last mentioned, the most important of these diseases, so far as the milk supply is concerned, is typhoid fever. In the public mind, outbreaks and epidemics of this disease are commonly associated with polluted drinking water; but where water supplies are properly guarded, as in Massachusetts, for example, they are more commonly found to be caused by contaminated food, and especially by that one which is most subject to pollution and which offers the specific organism the most favorable conditions for preserving its virulence and increasing its numbers, — namely, milk. During the past two years, of 18 local outbreaks of typhoid fever in different parts of Massachusetts, investigated under my direction, 14 were traced to milk and 3 to polluted, private or semipublic

water supplies; one could not be explained. In 11 of the 14 outbreaks traced to milk, there was a history of typhoid fever at the place of production, and in the others there was none. With suitable State supervision of milk production, under which it would be unlawful, under heavy penalty, to ship milk from dairies where typhoid fever or other disease communicable through milk are known to exist, until the authorities are satisfied that it can be done with entire safety, such outbreaks could be largely prevented; but under the most practicable and efficient supervision there will be milk-borne typhoid outbreaks which cannot be traced to any antecedent case on the farm. This is because in every community in which typhoid fever is endemic there exist numbers of persons who are unconscious carriers and disseminators of the typhoid bacillus. Of nearly 1,500 patients with typhoid fever examined by a large number of research workers in various parts of the world, with reference to the presence of the specific organism in the urine, nearly one-fourth (24 per cent.) yielded positive results. In many persons the bacilli persist for a long time after complete recovery, and they may be found in the fæces as well, whether or not present in the urine. According to Kutscher,¹ about 4 per cent. of typhoid patients become chronic carriers. Among 482 convalescents from the disease, Klinger² found 63 with bacilluria, and 8 continued to excrete the bacilli six weeks after recovery. Among 1,700 persons he found 23 typhoid carriers, 11 of whom had no typhoid history. Kayser,³ tracing outbreaks to their sources, found in one dairy a boy of twelve who was a chronic carrier, and in another a woman who, with no history of typhoid, was excreting the specific bacilli. The milk which she handled communicated the disease to 17 persons, 2 of whom died. Minelli⁴ examined 250 prisoners who had not been in contact with typhoid cases, and found 1 who had the bacilli constantly in his fæces. Among the same number of inmates of an asylum for the insane in which the disease had existed to some extent for a number of months, Nieter⁵ found 7 carriers. With regard to the time during which this excretion can continue there appears to be no limit. Levy and Kayser⁶ record the case of an inmate of an asylum who recovered from the disease in 1903, was believed to be the source of infection in an outbreak in 1905, and died in October, 1906, from the effects of an autoinfection from the gall bladder, from which, as well as from other parts of the body, the bacilli were isolated. Two cases are cited by

¹ Berliner klinische Wochenschrift, 1905, No. 52, p. 1620.

² Arbeiten aus dem kaiserlichen Gesundheits-amte, xxiv, p. 91.

³ *Ibidem*, p. 172.

⁴ Centralblatt für Bakteriologie, etc., 1906, 1 Abt., xli, p. 406.

⁵ Münchener medizinische Wochenschrift, 1906, No. 33.

⁶ *Ibidem*, 1906, No. 50, p. 2434.

Doerr,¹ in which the bacilli were isolated from the gall bladder seventeen and twenty years, respectively, after recovery; and Lentz² reports one in which they were found constantly in the fæces, even after forty-two years.

We have, then, carriers of the exciting cause of this disease who do not know that they ever have had it, in addition to those who apparently have completely recovered; and they may carry the infection as long as they may live. Such persons are, of course, to a certain extent a public menace, especially if they happen to be engaged in the handling of food products; but there seems to be no way of picking them out of the general population, nor, for the present, at least, of excluding them from dairy work. The ideal protection of milk supplies would include a thorough examination of every person who handles the milk in any way; but those who have had experience in promoting public health legislation know that such perfection is many years away.

But even if this measure were possible, there still would be milk-borne outbreaks, for the farm water supply must also play a part occasionally. The proximity of the privy vault to the well in country districts is a subject of common observation and remark; and chemical analysis often shows that a drinking water of good appearance is nothing more nor less than concentrated, partially purified house sewage. That the soil under certain conditions may harbor typhoid organisms for a very long time in active condition has been demonstrated repeatedly; and that in some waters the organisms find conditions favorable to long life has also been demonstrated. It appears, too, that extensively polluted water can be drunk habitually by some persons for years without apparent harm, an immunity having become established; while other persons, not accustomed thereto, are made sick by it. In case of specific contamination of such a water, it is conceivable that, while those living on the farm may escape infection, some of the consumers of milk which has been handled in pails and other utensils that have been rinsed with the water, or which has been diluted therewith, may be seized. In one of the outbreaks investigated in Massachusetts in 1905, and traced to milk, it was shown that some months before the owner of the farm had been ill with typhoid fever; that neither he nor anybody else on the place was then excreting the specific bacilli, but that the water supply was grossly polluted by the contents of the privy vault.

If among those living on a dairy farm there happens to be a chronic typhoid carrier, a person actively sick with typhoid or one convalescent therefrom, there is abundant opportunity for contamination of the milk produced. The infection may be direct or indirect. The hands of the

¹ *Centralblatt für Bakteriologie*, etc., 1905, xxiv, p. 624.

² *Klinisches Jahrbuch*, xiv, p. 475.

milker, who may be a chronic carrier or an ambulant victim or a late convalescent, may bear myriads of bacilli, even though not obviously soiled. The sick one may be a child, nursed by the mother, who empties the bed pan and helps, perhaps, in putting up the milk for distribution. Instances are on record where the chamber utensils and milk vessels were being washed at the same time in the same sink. The opportunities for infection of the milk at its source are too obvious to need extended discussion, and the same is true concerning the chance of infection while in the hands of the middleman and distributor.

The number of outbreaks of milk-borne diphtheria recorded is far smaller than those of typhoid fever. The reason is not far to seek. In the first place, diphtheria is not a water-borne disease, and hence the water supply plays no part. Again, while a person may carry virulent diphtheria bacilli in his throat for a long time, he does not excrete them in his urine and fæces, and has therefore far less occasion to infect his hands. That direct infection can and does occur, however, has been proved a number of times.

Concerning milk-borne scarlet fever there has been more or less controversy, some maintaining stoutly that cows are subject to a teat disease capable of causing scarlet fever in man. The whole theory of this connection is based upon the well-known Hendon outbreak and a number of epidemics of sore throat; but the evidence is far from convincing. The Hendon outbreak was undoubtedly due to contaminated milk; but the contamination was by human rather than bovine agency, for it was shown that opportunity for such infection existed, and it appeared that the teat eruption was cowpox, and not a form of scarlet fever. In a large proportion of the recorded outbreaks of milk-borne scarlet fever, the evidence of direct infection is very convincing. Few such outbreaks have been reported in this country, but it is not unlikely that they occur fairly frequently. One reason why they are not more commonly studied is that their run is short; the explosion is sudden, and the decline equally so. The most extensive one studied in this country, so far as I am aware, is one which occurred in January of the present year [1907], in Boston, Cambridge, Somerville and Everett, in which cities there were reported during the first seven days of the year a total of 63 cases. During the next five days no fewer than 485 cases were reported, — nearly 100 per day, — which number exceeded by 30 the number reported in the whole State during the first three weeks of January of the preceding year. The total number reported during the first three weeks of the present year from the four cities mentioned was 717. . . .

A considerable number of outbreaks of septic sore throat have been traced in Great Britain to milk from cows with garget; but so far as I

can recall, no such instances have been recorded in this country. In one of the English outbreaks the number of victims exceeded 500. If the cause was garget, it seems strange that such outbreaks are not far commoner, since garget is the most common bovine disease.

When an outbreak of any of these mentioned diseases occurs, the public is vastly excited and alarmed. If one or two persons die, so much greater the excitement. And yet the mischief wrought by all of the recorded milk-borne typhoid, diphtheria, scarlet fever and other outbreaks together for the past fifty years is as nothing compared with the frightful waste of human life which is allowed to go on in a single season in many of our large cities by reason of public indifference as to the character of the milk supplied to bottle-fed infants. There is something spectacular in a sudden explosion of scarlet fever or typhoid; but no particular interest appears to attach to the upcurve in infantile mortality, which begins about April, proceeds gradually during May and June, suddenly shoots almost vertically in July and August, and then takes a sudden drop with the advent of cooler weather. This violent fluctuation is caused by the enormous increase in that group of diseases which we know as epidemic diarrhœa and cholera infantum,—infections due almost wholly to a polluted milk supply. If we take the death returns of any large city, and throw out all cases of diarrhœal diseases, we will find that the curve of infantile mortality from January to January does not fluctuate very much, even in the summer months; and if we count up those which we have thrown out, we will find that they constitute, during the period of warm weather, the majority of all reported. In the cities and towns of Germany, with more than 15,000 population, there were in March, 1905, less than 1,500 deaths of infants from diarrhœal diseases; in April, the number rose to somewhat more than 1,500; in May, to nearly 2,000; in June, to about 3,250; in July, to nearly 11,000; in August, to nearly 16,000; and then came a corresponding fall. If we may take the statistics of Berlin as in a way applicable to the empire as a whole, less than 10 per cent. of these infants were breast fed. Taking it as 10 per cent., however, and adding to this an equal number of the bottle-fed class as a stand-off, we can see that had the general milk supply been ideally clean, more than 20,000 infant lives might have been saved in the months of July and August alone.

Are these enormous losses, which are going on almost everywhere, of no especial interest? They are, indeed, but not to those who can apply the remedy. They are of interest to public authorities who comprehend their obligations to the people, to a fair proportion of the medical profession, to a considerable number of philanthropists and to an exceedingly small fraction of the public as a whole. It is the purchasing public that

holds the key to the situation, and can apply the remedy for all milk-borne infections; it is the man behind the dollar who can secure insurance against milk sickness by refusing to give any of it for milk as ordinarily produced and sold, and by a willingness to give a little more of it for the right kind. But no, the extra few cents daily appears to be an insurmountable obstacle, even to those who are free even to wastefulness in other ways; and they are content to buy dirt of all kinds, including cow dung and pus, with their milk, secure in the thought that by heating the mixture for a few minutes it is made much safer to drink. It seems unfair to the public, and, in a business way, especially unfair to the clean dairyman, that dirty dairies should be permitted to exist; but the public is apathetic and will do nothing, and it appears that the only way to ensure reducing milk-borne infection is State and municipal regulation of dairies and distribution.

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